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OFFICIAL ORGAN OF THE NORTHWEST FRUIT GROWERS ASSOCIATION

VOLUME FOUR

NUMBER ELEVEN

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A COPY DOLLAR A YEAR

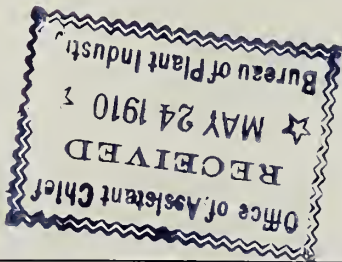
BETTER FRUIT

MAY 1910

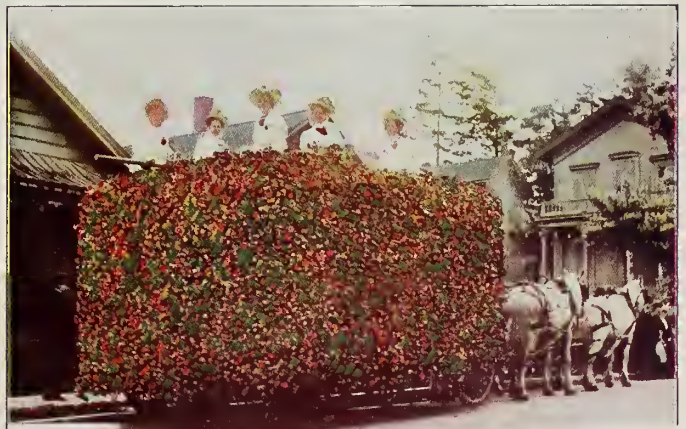
PORTLAND ROSE FESTIVAL EDITION



THE LA FRANCE ROSE AS GROWN
IN PORTLAND, OREGON



Every fruit grower should attend the Rose Festival, Portland, Oregon, June 6 to 11, which will be an object lesson on beautifying homes in the interest of a better country life



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ROSE FESTIVALS

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And Provide an Annuity for Old Age

We will plant and take care of the land during the growing period, turning over to you a bearing orchard, which will thereafter yield a competence for life. Easy terms.

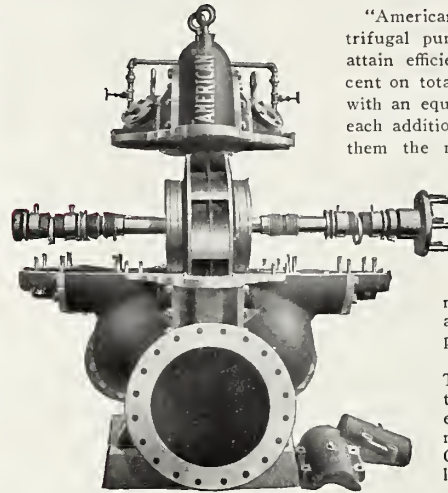
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"American" single stage centrifugal pumps are guaranteed to attain efficiencies of 60 to 80 per cent on total heads up to 125 feet, with an equal increase in head for each additional stage, which makes them the most economical pump made for irrigation purposes.

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Not
Found
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Scene
at
Greenacres

PLANT AN ORCHARD IN THE SPOKANE VALLEY

The soil, the climate, the water supply, the quality and quantity of fruit equal to the best, but cheaper land. Ahead of all fruit districts in transportation and home location

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GREENACRES

OPPORTUNITY

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401 Sprague Street

SPOKANE, WASHINGTON

APPLE IS KING

Grandview Breyman Orchard Tracts

Yamhill County, Oregon



Adjoining the great 300-acre *Apple Orchard* of M. O. Lownsdale; also Thomas Prince's *English Walnut Grove* and *Prune Orchard*

Thirty-two miles south of *Portland* on Southern Pacific Railroad; only two miles from Dundee and Dayton stations

Named "Grandview" on account of the magnificent scenery, valley and mountains. The land is reddish clay loam with iron oxide, volcanic ash shot soil (similar to Hood River's best). Has gentle slopes, with natural drainage. Being high grade orchard land by actual test, we need not go into details.

Irrigation is never needed in this district; apples, pears, cherries, peaches, prunes, grapes, walnuts and all the small fruits and berries mature without it. The annual rainfall is about forty-five inches, just enough and not too great for comfort. We throw no stones at irrigation, because it reclaims bleak, sandy, desolate land into habitable conditions, for those who are financially unable to pay for the best.

To the man who wants a select home place, where he can take his family and enjoy life, among high class environments, own an orchard planted to Yellow Newtown Pippins, Spitzenbergs, Delicious, Jonathans, Winter Banana, etc. We solicit investigation. The green fields and beautiful country surrounding Grandview Orchards are a source of delight to the eye.

Elevation, 300 to 500 feet above the valley, upon a fine plateau, sloping gently towards other orchards now bearing fruit. It is among the hills, but not bottled from sight (600 to 800 feet above sea level). Mount Hood, Mount Adams and Mount Jefferson's snow-crowned peaks loom proudly to the eastward.

Cities of McMinnville, Newberg, Lafayette, Carlton, Dundee and Dayton may be readily seen.

Best of all, we are offering small tracts, 5 to 10 acres, at \$400 to \$500 per acre, set to commercial apples, with several years' care under our personal supervision. These orchard tracts comprise a body of land nearly 1,000 acres in extent, situated just right for the most discriminating person, who knows.

Transportation service is good. Automobile boulevards lead in all directions. A new electric line from Portland will soon be completed past our holdings. Steamboats carry freight and passengers to Dayton. Readers of "Better Fruit" are respectfully invited to look over these Grandview Tracts.

Pure spring water and perfect air drainage are points worthy of mention.

An orchard on Grandview Heights will pass through frosty seasons without injury, while great damage would result to fruit buds on lower levels.

English walnuts, pears, cherries and peaches can be planted with apples, if desired by our customers.

COMPLETE PARTICULARS IN BOOKLET, "APPLE IS KING"

THE ABOVE BIRD'S-EYE PANORAMA SHOWS LOCATION OF OUR PROPERTY, WHICH MAY BE INTERESTING TO STRANGERS

McFarland Investment Co.

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PORTLAND, OREGON

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101 Park Place, New York

*The largest and most extensive fruit concern in the world
operating in all the fruit growing sections of the civilized globe*

Exclusive Purveyors of High Class Fruits

STEINHARDT & KELLY Handle More

BOX APPLES

Than any Other Concern in the Country

and was the first fruit house to extensively introduce the Northwestern product to the consumers of the East. With able representation in all the leading markets Steinhardt & Kelly are enabled to handle the entire crops of the most extensive districts with utmost ease and celerity

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INDIVIDUAL GROWERS WILL BE GIVEN PERSONAL ATTENTION

A Revolution in Spraying!

APTERITE, THE NEW SOIL FUMIGANT

HIGHLY
CONCENTRATED
RELIABLE
AND
EFFECTIVE
CLEANSE AND
INVIGORATE



NO SEDIMENT
NO CLOGGING
MIX INSTANTLY
WITH
COLD WATER

Read Hood River's Testimony

Mr. C. G. Roberts:

In response to your request for results in using Cooper's Sprays last season, I have to inform you that it was a success, and am so well satisfied that I propose to use nothing else during the coming season, and confidently recommend its use to my neighbors in Hood River and fruit growers generally. The V1 or winter spray is most convenient and clean handling, and cleaned up my trees from loose bark and insects or eggs which may have harbored therein. The summer spray, V3, destroyed codling moth, the brown aphid, and, so far as I know, the spores of fungus, as my apples ripened almost free of imperfection, ready for packing, as I did not require to wipe them, as usual by other sprays.

L. D. Boyed.

Hood River, Oregon, November 9, 1909.

This is to certify that I used Cooper's V1 Spray for fungus, according to directions, on six acres of Newtowns last March, of which last year was about 20 per cent fungus, this year not more than one per cent. The spray is easy to prepare and very agreeable to apply, and I consider it the most economical spray I ever used. I use the finest nozzle, with a big pressure, and choose a quiet day for spraying to get the best results.

O. M. DeWitt.

Hood River, Oregon, November 18, 1909.

In regard to the Cooper Spray, in answer to your inquiries as to what success I have had with it, will say that I have been somewhat worried about fungus on my apples for several years until last year, when I used V1 for winter spray, and am well pleased with results, as my apples were almost entirely clean of fungus this season. Shall try it again the coming season.

J. R. Crosby.

Hood River, Oregon, November 17, 1909.

I used the Cooper Spray V1 for fungus and can say that I am well pleased with its results. On a crop of about 300 boxes of apples I had only about one box that was affected with fungus. As for convenience, I can recommend it ahead of any other spray I ever used. My trees were affected but very little with aphids after using the V1.

J. H. Eggert.

Hood River, Oregon, November 17, 1909.

Mr. C. G. Roberts:

I have used the Cooper Winter Spray and it put my trees in fine and healthy shape. I consider it a very economical spray and pleasant to handle, not hurting the hands nor having the disagreeable effect on the hands and face of the sprayer of the lime and sulphur sprays.

E. C. Mahaney.

Hood River, Oregon, November 20, 1909.

Mr. C. G. Roberts:

Dear Sir—In answer to your inquiry about results from the use of Cooper's Spray, will say that my apple orchard had become badly infested with fungus. I made one application of V1 spray early in March, while the trees were yet dormant, with results that my apple crop is practically free from that disease. It also cleansed the trees of moss and other objectionable growths. I am so well pleased with results that I shall use it again next year.

Yours very truly,

M. D. Odell.

Hood River, Oregon, November 17, 1909.

Mr. C. G. Roberts:

I have used three gallons of winter spray, the Cooper V1, on my orchard and the orchards near mine that I am caring for. I find it the best spray I ever used, as it cleaned my trees of scale and fungus and put the trees in the most healthy condition. This spray is pleasant to handle, having none of the objectionable qualities of lime and sulphur spray, and I consider it the most economical I ever used. I recommend it to my neighbors and fruit growers generally.

L. A. E. Clark, Pippin Hill Fruit Farm.

Hood River, Oregon, November 20, 1909.

C. G. Roberts, General Agents Cooper's Spray:

Dear Sir—I used V2 fluid, or summer spray, this spring, for green aphid, and got very satisfactory results; in fact, as good as any other kind I ever used.

Yours truly,

A. D. Moe.

Hood River, Oregon, November 13, 1909.

I will say that I have tried the Cooper Summer Spray and it cleaned my trees from the green aphid as good as any spray I have had experience with.

E. N. Benson.

Hood River, Oregon, November 20, 1909.

This is to certify that I have used the Cooper Spray, V2, on my orchard and it cleared it of green aphid and fungus and put the trees in healthy condition.

Louise J. Schiller.

I hereby certify that I used the Cooper Spray once in the spring and the trees showed marked improvement.

Charles Davis.

Hood River, Oregon, November 27, 1909.

This is to certify that I have used Cooper's Tree Spray Fluids, V1, for killing San Jose scale and found it very effectual.

G. R. Castner, County Fruit Inspector.

Write for 32-page booklet (third edition) just published

Containing much interesting matter, also testimonials from many other fruit growers

C. G. ROBERTS

247 Ash Street Portland, Oregon

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Specialties: Apples, Peaches,
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WE HAVE MODERN COLD STORAGE FACILITIES
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Grade and Pack Guaranteed

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Are solicited, all your shipments
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Growers and Shippers of the Famous

Mosier Valley Fruits

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We have modern cold stor-
age facilities essential for the
handling of your products

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Apples, Pears, Peaches, Cherries,
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and Cantaloupes

Mixed carloads start about
July 20. Straight carloads in
season. Our fruit is the very
best grade; pack guaranteed

We use Revised Economy Code

LINDSAY & CO. LTD.

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Established in Helena Quarter of a Century

Branch houses: Great Falls, Mis-
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Superior facilities for handling

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APPLES AND
PEARS

Solicit Your Consignments

Reliable Market Reports Prompt Cash Returns

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FRUIT Western
Soft Pine.
Light, strong
and durable.

"Better Fruit"
subscribers
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"Better Box."

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CAN MAKE TWO CARLOADS DAILY

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Wholesale Manufacturers

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Our Own Cold Storage Plant on Premises

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For Sale—100 acres, half in cultivation, located three miles north of S. P. depot, on "Newberg Heights." Especially favorable for the production of "Easter and Thanksgiving strawberries." Spring water for irrigation, power and domestic purposes.
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Without exaggeration, we have to offer the finest irrigated apple land in the West, in small tracts, planted to trees, some in bearing. Between the trees is ample garden land for growing sufficient produce to pay for the land while the trees are maturing.

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Successors to
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Wholesale Fruits and Produce

We make a specialty
in Fancy Apples, Pears and
Strawberries

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The Old Reliable Fruit House

We occupy our own building, which is one block square and located on Northern Pacific tracks, Spokane, Washington.

Consignments solicited. We make weekly returns.

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We handle local or carload shipments of fruit and vegetables. Honest dealings and prompt returns.

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Only twenty-two miles from Spokane. Excellent transportation facilities, ideal climate, irrigation by gravity

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THE HOME OF THE PERFECT JONATHAN

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We are land dealers and own our offerings. Fruit lands and suburban tracts our specialties. Liberal terms.

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“Walla Walla made the pleasantest impression upon my mind of any city I visited while in the Northwest”

AND THERE IS A REASON!

It is in the center of the

Oldest Orchard District

of the state, where every condition is right and prosperity abounds

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80 ACRES SOUTHERN OREGON FRUIT LAND

Ten miles south of Grants Pass, three miles east of Wilderville, on public road and rural telephone line; 40 acres Applegate Valley land, 25 acres of it in cultivation, 8 acres of it moist, timothy or pear land; 40 acres second bench red land, suitable for fruit; would be easily cleared. Price \$3,500.

JOHN H. ROBINSON
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Apple Land Near Goldendale, Washington

A newly developing fruit district on the Spokane, Portland & Seattle Railroad, adjacent to The Dalles and Hood River, Oregon. It has been demonstrated that there is some of the best apple land in the world to be found in the famous Klickitat pine belt near Goldendale. Two large canals will be built overlying these lands in the near future. Just think! We can sell you No. 1 good apple land for \$12.00 to \$30.00 per acre. Careful selections made for non-residents.

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Choice ten-acre tracts Okanogan fruit land. First-class upper bench, near government canal; 1,280 feet altitude. Well water in gravel, thirty feet, pure. Planted to yearling apple trees; best red winter commercial varieties; also tracts not planted. Ready to irrigate. Great Northern Railroad now building in Okanogan Valley. Prices and terms right.

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A Promise of Good Returns

The LAND OF OPPORTUNITY

LOCATED across the Columbia River from Hood River, Oregon, the White Salmon Valley offers the greatest opportunities of any land on earth to fruit growers. Where apples, cherries, pears, peaches, prunes and strawberries grow to perfection. A few dollars invested in fruit land today will return to you in a very few years sixty-fold. The soil, climate, water and scenery are unsurpassed by that of any country. Build a home where you can enjoy peace and plenty the remainder of your life.

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CHERRIES

STRAWBERRIES

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BARGAINS IN LYLE APPLE LAND

120 acres, 4 miles from Lyle. Good 8-room house, good barn; on county road; 80 acres under cultivation; all fenced and cross fenced; spring water piped to house; 700 young peach trees, 100 bearing apple trees. This is all good peach, grape and apple land, and a snap at \$45 per acre.

94 acres, 12 miles from Lyle; fine apple land; small house and barn; 7 acres cleared, 3 acres in alfalfa; plenty water. For a short time only \$25 per acre.

50 acres, 6 miles from Lyle, all fenced; good 9-room house, good barn and other outbuildings; 400 bearing apple trees, 100 bearing peach trees, 700 young apple trees; on good county road; good well water. At \$80 per acre.

960 acres, 9 miles from Lyle, on two good county roads; all fenced and cross fenced; large house and large new barn; plenty of water; 40 acres in wheat; all good fruit land. A good buy at only \$25 per acre.

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A YOUNG ORCHARD NEAR LYLE

A land wonderfully favored in climate, soil and environment. Apples and all tree fruits grow to perfection without irrigation. Lands for wheat raising, hay and dairy farms. Also for small fruits.

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ITS LANDS offer safe and profitable investment; none have invested in these lands without profit; the upward trend must continue, as good apple land is limited; ten acres of bearing apples is a fortune; a fruit failure in this section is unknown. We make a specialty of orchard sites and can locate you right. Write for list.

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Offers you the opportunity of buying five acres or more of their COLUMBIA ORCHARD TRACT, which is the finest orchard land at **MOSIER**, on the easy payment plan.

First, you make a small cash payment on the purchase price of a five or ten-acre tract, and instead of placing your savings in the bank, where they will only pay you 4 per cent interest, pay us \$25 to \$35 a month until your land is paid for.

Second, we set the land you buy to the best varieties of commercial apples and take care of the same for you for **five years**.

Last, but not least, you **do not** pay interest on deferred payments, and we pay the **taxes**.

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PER ACRE NET

\$1000



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We have the sale of 160 acres at Lyle, 2½ miles from the North Bank railroad. The ten acres with the buildings and three acres of six-year standard apples, with peach fillers, \$200 per acre. The balance, uncleared, mostly brush and oak grubs, \$75 per acre; \$50 down and \$15 per month will buy ten acres.

A card will bring you a complete description of the property and the selling plan, together with a booklet about the apple industry in this section, and a list of property we have for sale.

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(Incorporated)

HOOD RIVER, OREGON

White Salmon Valley

40 acres, \$4,000; 3 acres of trees, Spitzenbergs and Newtowns, 3 and 4 years old; will bear some fruit this year. Five acres under cultivation; ten acres easily cleared; small buildings; pure water; best air and water drainage.

Ask for complete list.

WHITE SALMON LAND COMPANY

Office over Post Office Building

WHITE SALMON, WASHINGTON

White Salmon Valley

WASHINGTON

Across the river from Hood River Valley, Oregon in the Banner Apple Belt of the World



The WHITE SALMON VALLEY today presents OPPORTUNITIES FOR INVESTMENT beyond that of any other FRUIT REGION in the Northwest. It is the north half of a LARGE VALLEY lying between Mount Adams on the north and Mount Hood on the south. The mighty Columbia flows between and divides this valley. From the Columbia River to Mount Hood forms the Hood River Valley, and from the Columbia River to Mount Adams forms the White Salmon Valley. Both these mountains are snowclad all the year and influence the climatic conditions. This, together with a volcanic ash soil, produces apples that are superior to all others in the world in FLAVOR, SIZE, COLOR, and, most important of all, KEEPING AND SHIPPING QUALITIES.

Ninety per cent of the fruit grown in this valley is exported, bringing the highest market prices.

THE CLIMATE of this region is ideal. It is located in the midst of the CASCADES, with a pure mountain air and free from excessive rains or drouth. The snow-covered peaks at either end of the valley temper the heat of summer and make the summer nights cool and invigorating. The winters are as a rule mild and short. The scenery is as fine as may be found anywhere on the continent.

The valley has been held back heretofore through lack of railroad transportation, but the SPOKANE, PORTLAND & SEATTLE RAILROAD, part of the Hill system, now in operation, gives this valley the best of shipping facilities.

NOW IS THE TIME TO SECURE A CHOICE ORCHARD TRACT AT A LOW FIGURE. Write today for particulars of this wonderful valley to the

WHITE SALMON VALLEY DEVELOPMENT LEAGUE

White Salmon, Washington

White Salmon, Washington, Fruit Lands

The White Salmon Valley, which is located on the north bank of the Columbia River, directly opposite Hood River, Oregon, is becoming widely known as one of the very best fruit districts in this country and is rapidly being settled by an intelligent, refined and industrious class of people, who find fruit culture in this delightful spot both pleasant and profitable. Fruit shipped from this station at 5 p. m. is the next morning on the markets of Portland, Seattle, Tacoma and Spokane, reaching a total population of one million people the next morning after being picked.

We have secured for sale during the next sixty days many of the most desirable tracts of land in this district, same in large tracts for investors to subdivide, and others are smaller home tracts, same of which are in the raw state, some improved or partly so.

We have personally examined all of the land which we offer for sale and will guarantee each tract to be as represented.

We offer below some of the most desirable tracts for the money on our list. If interested, write or wire us early, as there is a large demand for this land now and these bargains will not last long.

510—120 acres, with 35 under cultivation; 10 acres in 2, 3 and 4-year-old Spitzenberg and Yellow Newtown apples; also small family orchard of different fruits; good 6-room house with room for 2 more upstairs; large barn and other outbuildings. This is a very desirable ranch, with all good orchard land. Price only \$14,500; one-third cash, balance 2 years at 7 per cent.

516—30 acres 1 mile from Husum, 6 from White Salmon, ½ to White Salmon River; on county road; all but 4 acres nearly level; two all-year springs; good soil; yellow pine on the land will about pay for cost of clearing; mail and stage every day except Sunday between White Salmon, Husum and Trout Lake; land on three sides is cleared and set to orchards. This piece has been tied up until recently, but can now be bought, if taken soon, at \$165 an acre, which is \$85 an acre less than similar land adjoining.

514—40 acres; one of the best tracts of apple land in the whole district; all lays nearly level, with just enough slope for good drainage; ¼ acre of 10-year-old orchard, balance covered with hazel brush and second growth fir, which is easily cleared; ¼ mile to postoffice, 2 miles to railroad station, 4 miles to White Salmon; joins the celebrated Zigler proven orchard and is surrounded by developed orchards owned by a good class of people. Price \$4,000; half cash, balance 2 years at 8 per cent.

519—80 acres, 60 nearly level; red shot soil; flowing all-year spring. A fine investment at \$45 an acre; half cash, balance 3 years at 8 per cent.

517—10-acre home for only \$1,500; house, woodshed, etc.; 2½ acres all ready for fruit trees; all of tract slashed and burned except a small grove about the house; surrounded by 10-acre homes in a desirable fruit colony; on main road, with fine view of Mount Adams. Price only \$1,500; half cash, balance 3 years at 8 per cent.

526—6 acres, located in the city limits of White Salmon; an ideal home site, with fine view; ¾ acres all cleared and set to strawberries and fruit trees; red shot soil and all good fruit land except ½ acre, which would make a desirable building site. Price \$3,000; half cash, balance 2 years at 8 per cent.

528—160 acres, 150 of which is practically level; deep red shot soil, the very best for apples; about 10 acres good hay land; county road lays across it; 8 miles from Husum, where a tract of 1,000 acres is being developed by two orchard companies; mail tri-weekly. This is a real snap at only \$50 an acre.

Hood River Valley bearing orchard land sold the past week at \$2,200 per acre and uncleared land at \$528. In the White Salmon Valley you find the same conditions exactly as directly across the Columbia in the Hood River district and can buy as good or better land at half the price.

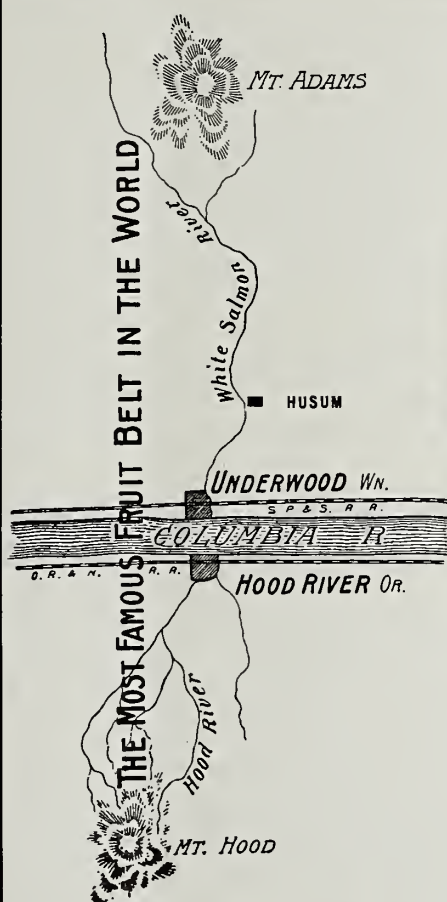
Send for booklet descriptive of this district, as well as for general information on our lands, to

WHITE SALMON REALTY CO.

WHITE SALMON, WASHINGTON

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The Gateway to the White Salmon Valley



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The development of the White Salmon Valley has been retarded only by the lack of transportation, now supplied by the completion of the Spokane, Portland & Seattle Railroad, giving through transcontinental service in connection with the Northern Pacific and Great Northern Railroads.

No proven apple growing district offers the same opportunity today for profitable investment as White Salmon. The prices at which we are offering the richest of apple lands will double and treble in value before reaching Hood River's high level.

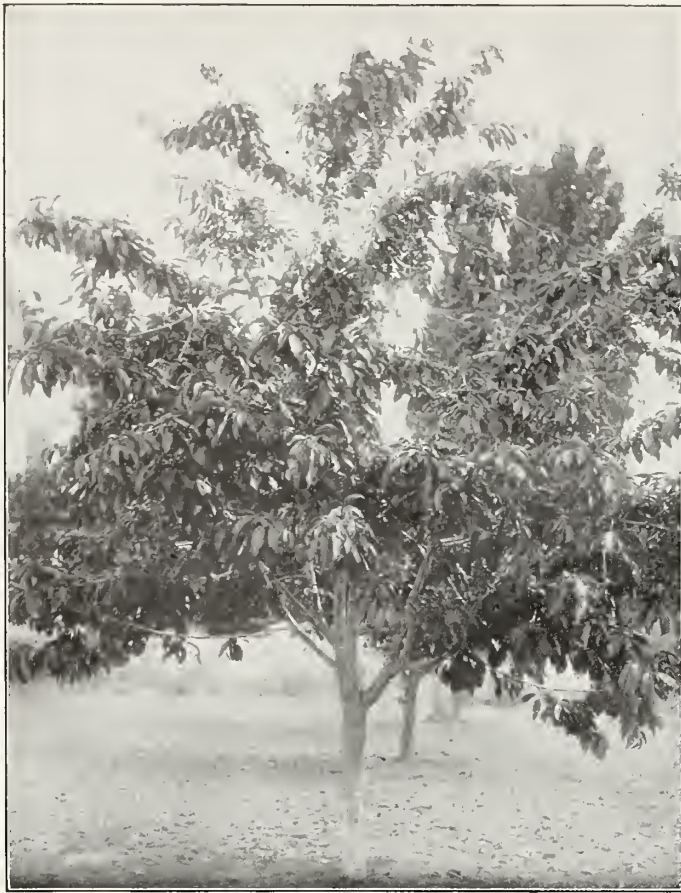
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Dealers in Fruit Lands

The Dalles, Oregon

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"The Kuhn California Project" will irrigate 250,000 acres in the famous Sacramento Valley. The land is ready! The water is ready! Are you ready? The sale of these rich valley lands has just begun in tracts of ten to eighty acres. Small payment down; then ten annual payments.

The valley is garden soil, fifty feet deep, yielding immense crops of fruit, alfalfa, sugar beets and all the famous products of California. Mature orange groves on these lands have yielded as high as \$1,000 per acre. If you are going to have a farm, why not have the best? The Kuhns are always looking for the best, and their experts tell them in this enterprise they have found it. They are putting millions of dollars into improvements to make it still better. The land is close to big markets and will pay for itself.

You take no chance in buying land under the Kuhn projects. The Kuhn interests are irrigating 400,000 acres in the Twin Falls country, Idaho. Their great Sacramento Valley project offers an almost frostless winter and a still wider range of crops. Organize a California colony in your own city or town. Take your neighbors with you.

Just published a very choice book of forty-eight pages, "California—Now or Never." It is by far the handsomest California book ever issued and will show you at a glance whether you want a home ranch in California. To insure a select distribution, it is priced at ten cents. All other publications which are fully descriptive are free. Fill out the coupon below and mail. If you want the new book, enclose ten cents for each copy.

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Oregon's Official Informant

Suite 616 Chamber of Commerce Building

Portland, Oregon

First Class Bargains in Hood River

- 6 acres on the east side, all in orchard; no buildings; \$2,700.
- 10 acres west side, very best land; 8 acres orchard, 2 and 4 years old; 3 acres strawberries; 10 shares water stock; no buildings; \$9,000.
- 10 acres on the west side, all in 4 and 5-year-old trees; 6 acres strawberries between the trees; fruits of all kinds for home use; good buildings, farm implements; \$10,500 for quick sale.
- 10 acres west side; 8 acres in bearing orchard; good house, with running water; splendid bargain; \$10,000.
- 40 acres on the west side; 8 acres in full bearing 14-year-old trees, 20 acres 4 and 5 years old, 5 acres 2 years old; good buildings; splendid property; \$50,000.
- 20 acres on the east side, mostly in 3-year-old Spitzenbergs and Newtowns; very best land; splendid bargain; \$16,000.
- 19 acres on the west side; 16 acres in clover and alfalfa; all first-class apple land; splendid property and fine building site; red shot soil; \$7,500.
- 20 acres on the west side, all in orchard; 15 acres 3 and 4-year-old trees, and 5 acres in bearing; \$18,000.
- 21 acres on the east side; 7 acres in bearing trees, balance from 2 to 6 years old; buildings and 5 inches irrigating water; \$21,000 for short time only.
- 40 acres in Mosier; 20 acres in orchard from 3 to 9 years old, all good varieties; buildings, etc.; \$11,000.

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J. H. HEILBRONNER & CO.

THE RELIABLE DEALERS

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HOOD RIVER, OREGON

HOOD RIVER APPLE LANDS

Pay Big Dividends—Values Will Double in Three Years

WRITE FOR COMPLETE LIST OF PROPERTIES

35 ACRES—20 acres of which are planted to Yellow Newtowns and Spitzenbergs, one-third of which are in full bearing; balance is partly cleared; large 8-room house, stone apple house, 5-room tenant house, good barn, etc.; also new pumping plant, which cost \$700. Located 4½ miles from Hood River, on county road. This place will sell for \$40,000 within a year, and is a big snap at \$30,000. Terms.

20 ACRES—Mostly improved; 9 acres in commercial orchard, 6 acres 3 years old and the balance 1 and 2 years old; 3 acres of the orchard is planted to strawberries; 5 acres in stumps, ready to clear; balance of place in meadow; small house; 6 inches of water stock; 7 miles from town on county road. A good buy at \$10,000; \$3,000 cash.

BEAUTIFUL RIVER HOME—20 acres near the famous Tucker orchard and commanding a beautiful view of Hood River and the valley; best volcanic ash soil; 8 acres cleared, balance in fir timber; small house and barn on place. With a few improvements this can be made one of the most attractive homes in the valley. Price only \$2,200; terms.

75 ACRES—Right in the heart of the valley; 16 acres in commercial orchard, half of which is in full bearing, balance 1 to 5 years old; 14 acres more in cultivation, balance in pine and oak timber, light clearing; large house with modern plumbing; stock, farm implements and everything included at the price of \$25,000; one-half cash.

15 ACRES—All very best volcanic soil; 6 acres in 1 and 2-year-old commercial orchard with 50 peach trees as fillers; 6 acres in brush and light timber; 3 acres in a natural park between the house and river,

with road winding through it, with a magnificent view of river and mountains; new modern 6-room artistic bungalow, with spring water piped through same; new barn; cow, chickens, wagon, buggy, etc., go with place; also 10 shares in Apple Growers' Union. Price \$10,000; \$2,000 cash will handle it.

80-ACRE TRACT on the east side, 5 miles south of Hood River; nearly all planted to Newtowns, Spitzenbergs and Jonathans, as follows: 5½ acres 9 years old, 22 acres 7 years old, 5 acres 6 years old, 20 acres 3 years old, 10 acres 2 years old, and 5 acres 1-year-old trees; also 5 acres 1-year-old pears and an acre of 20-year-old assorted family orchard; balance meadow. This is one of the finest orchards in the valley; lies between two main county roads; best volcanic ash soil, spring water, good buildings, excellent drainage, and could be subdivided into a number of fine homes at a big profit. Place as a whole will pay over 16 per cent on the purchase price this year. Price \$80,000; \$25,000 will handle it.

12½ ACRES—Nicely located in the Oak Grove district; 6 acres in 4-year-old Newtowns and Spitzenbergs in fine condition, 3 acres in 2-year-old strawberries, 2 acres in 1-year-old strawberries; 50 peach trees as fillers; good family orchard; small house. A splendid buy at \$7,500; \$4,500 cash.

20 ACRES—Unimproved, 7 miles out on the east side; red shot clay soil, high and slightly, perfect drainage. This tract lies fine for orchard; under the East Fork irrigation ditch. Beautiful building spot with several large oak trees. One of the best places in the entire valley. Price \$325 per acre; \$1,500 cash.

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SWETLAND BUILDING, Portland, Oregon

HOOD RIVER, OREGON

BETTER FRUIT

A MONTHLY ILLUSTRATED MAGAZINE PUBLISHED IN THE INTEREST
OF MODERN AND PROGRESSIVE FRUIT GROWING AND MARKETING

PORTLAND AND THE COMING ROSE FESTIVAL

BY W. P. STRANBORG, PORTLAND, OREGON

THINK of a single city setting out 250,000 rose bushes in the brief period of three years; think of a city that becomes obsessed of an idea that will give it world-fame and then working night and day, week in and week out until such a feat has become an accomplished fact.

Portland, in the spring of 1907, determined that it should be known the world over as the foremost "city of roses," indeed, the one unchallenged "Rose City" of the world; and since that time, a canvass of the district improvement associations and residence districts show very clearly that no fewer than a quarter of a million of rose trees have been set out. Look for a moment what this means. The ordinary rose bush of Portland, when cultural and climatic conditions are normal, will produce 100 blooms at the very minimum. This means from the new growth since the Festival idea originated a total of fully 25,000,000 flowers, to say nothing of the hundreds of thousands of older bushes and trees that contribute their thousands of flowers at each successive Festival.

The management of the Portland Rose Festival has been inspired in a large way in its intensification of rose culture by observing what Hood River has been doing in bringing the world's finest fruit to its present point of excellence. The methods in both instances are identical and it has been one of the most impelling ideas that the men behind the Festival have cherished to give Oregon horticulture a most commanding position in all its brilliant parades. This has been demonstrated in the former "Spirit of the Golden West" parades in connection with the yearly carnivals, for these street pageants have served to exploit the genius of the Oregon orchardists to the greatest possible advantage. This feature of the "Feast of Flowers" this year is to be made more important than ever before. In the words of President Ralph W. Hoyt of the Rose Festival, "Our idea is not to advertise Portland as the city of roses so much as it is to give world-wide publicity to the whole state of Oregon. Hood River has placed its ineffaceable mark upon the world's markets with its incomparable apples, and we are anxious to give similar exploitation to all the varied industries of our magnificent commonwealth."

General Manager G. L. Hutchin of the Rose Festival pays glowing tribute to the "promised land of apples." He says

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Continued from April Edition

slogan for the vast empire which the united forces of publicity in this region are endeavoring to exploit.

"We might well adopt 'better fruit' as the shibboleth of our extensive campaign of publicity for the entire state," says Mr. Hutchin. "Hood River has set Oregon a wonderful example in what we can do in this state. We in Portland are trying to set a similarly lasting example in rose culture; other sections are declaiming 'better fruit' in manifold lines of industry. We have the apple, the pear, the peach, the cherry, the prune, the walnut, the cranberry, the melon, the blackberry, the strawberry, the loganberry and many other products of the state which will improve and give us wide renown under the cry of 'better fruit.'"

The plans for the Fourth Annual Rose Festival, to be held in Portland during the week of June 6-11, are now completed, and the approaching celebration bids fair to eclipse all previous events of the kind held on the Pacific Coast, both in point of elaborate, spectacular features and in the volume of outside attendance. Many brilliant and unusual attractions have been arranged, and the Festival management has secured special low round-trip excursion rates from all points in the East, the Middle-West



"ROSES BLOOM AS LATE AS SEPTEMBER IN PORTLAND"

and along the Coast, beginning just before the opening of the Rose Festival and good for ninety days, together with all stop-over privileges.

The week of gaiety will open with a royal welcome to the "homecomers" on Monday, June 6, and a feast of lanterns and a general programme of illumination will be featured. There will also be a reproduction of the battle of the Monitor and the Merrimac on the Willamette River, with an elaborate display of pyrotechnics at the Oaks Park on the same evening.

On Tuesday the main feature will be the competitive exhibit of roses at the Exposition grounds, with millions of choice blooms entered in the contest for costly trophies and ribbons. Last year's exposition brought out what expert rosarians pronounced the greatest congress of flowers in the world. At the coming show, if the roses fulfill present expectations, the local rose growers will have on display a wilderness of beautiful blooms that will surpass anything that has ever been attempted in this country, or any other.

There will be a magnificent parade of automobiles, decorated with roses and other flowers, which will embrace over 1,000 cars, and will include a procession through more than twenty-five miles of Portland's streets. It was estimated that more than 5,000,000 roses were used for decoration of the motor cars in last year's parade, and this year will be bigger than ever. For elaborateness of decorations and floral dressing, the horse and vehicle parade, which was four miles in length a year ago, will give even a greater demonstration of Portland's claim to be the "Rose City" of the world.

In the "Spirit of the Golden West" parade there will be a great number of gorgeous and costly floats, showing the products, resources and manufacturing industries of the entire Northwest. From the entries already received it is assured that this one procession will represent an actual outlay of \$100,000.



IN THE ROSE GARDEN

Some of the great industrial establishments of Portland are preparing to spend as much as \$2,000 on their individual floats, and there will be fully seventy-five entries in the parade.

Another interesting and impressive public function will be the appearance of 10,000 public school children who will march through the flower-strewn streets, going through their intricate evolutions and making a kaleidoscopic perspective along the line of march.

The majestic electrical parade, covering historical, allegorical and mythological subjects, will be of a bewildering beauty and splendor to surpass any similar pageantry ever given in the United States.

In addition to these many features, the Portland Hunt Club, the city's famous society organization of skilled horsemen and horsewomen will co-op-

erate with the Multnomah Amateur Athletic Club in giving a three-day society circus during the Festival week, on Multnomah Field.

Aeroplanes, dirigible balloons and airships of various sorts will be on the grounds, and aviation contests will figure in the festive sports. There will be international road races of famous automobile speed record-makers. The Rowing Club, the Yacht Club, the Motor Boat Club of this city, together with aquatic organizations from other Northwestern centers, are enthusiastically arranging for events for the Festival regatta. During this feature of the general programme a monster marine pageant and water carnival will be given.

The Riverside Driving Association, which has had prize-winners in every horse show held on the Sunset Slope in recent years, will give a matinee of interesting events on the Country Club track, one of the finest one-mile courses in the country.

The more public and general attractions will be supplemented by other events of importance, for arrangements have already been closed for the holding of more than a score of prominent fraternal, social and business conventions in Portland during the week of the Festival. Forty bands have been engaged to furnish the music for the different parades and other functions.

A brilliant "Court of Honor," located on Sixth Street, from Ankeny to the Hotel Portland, a distance of more than seven blocks, will be ornamented with vases of heroic height at intervals of fifty feet on each side of the street, and they will be kept filled with fresh roses each morning during the six days of celebration.

An unusually elaborate scheme of decoration for the city, both in the business and residence districts, has been worked out.



CAPTAIN CHRISTY

INFORMATION FOR PRACTICAL GROWING OF ROSES

BY J. A. BALMER, ROSARIAN, CLE ELUM, WASHINGTON

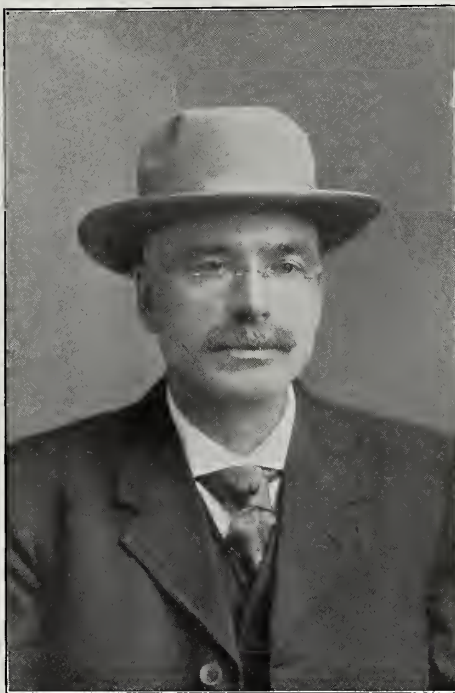
THE ROSE in history, the rose in poetry, or the rose as the national flower of the Englishman is to be made no part of this paper. What I have to say of the rose and its culture are hard, practical facts gathered from a lifetime experience in the culture of this, the most beautiful, and justly the most popular of all flowers.

All authorities agree that the rose does best on a retentive soil; that is, a soil that gives up its moisture slowly. The most retentive soils are clay soils, and what we call a clay loam—but which few could pick out or know when seen—is probably the best all-round soil for rose growing. A clay loam has enough sand in its composition to enable it to work well, and besides the clay and sand it will have enough decayed vegetable fibre to give it that nut-brown appearance which is so desirable in a good rose soil. A soil of the right texture to grow roses well can be worked soon after it quits raining, and that does not compact like a brickyard as it dries. The flocculated soils of the Pacific Coast, commonly called shot-clay soils, are among the best rose soils we have; they drain easily, airate well, yet give up their moisture slowly.

Having selected your soil, the next thing to do is to look for a good site. An exposed, yet sheltered position is the best. Shelter from the prevailing winds, yet fullest exposure to sun and air will give the best results. One cannot always select the site or the soil, but the soil can be hauled for a bed of roses and will certainly be a good investment if that on the place is not of the right texture. Let no one despair of having roses for lack of the proper soil, for roses will grow in most soils, but will grow best in the soils above mentioned.

To prepare a bed or border for roses,

dig deeply, at least two spades depth; this is called trenching. Land in which water stands at any time of the year within two feet of the surface is not suited to roses. While roses love moisture, they will not endure wet feet;



J. A. BALMER, ROSARIAN
Cle Elum, Washington

therefore, see to the drainage of your rose quarters. In planting a rose border it is well to remember that they are expected to endure and do well for at least a dozen years; and that during all that time they must be liberally fed if they are expected to do their best. A well-prepared rose bed, then, ought to be dug deeply, and incorporated in the soil there ought to be broken bones about the size of a walnut, and less; a liberal quantity of charcoal, broken to about the same size as the bones. Of these, use all you can get up to one-third the bulk of the soil in the border and incorporate to the depth of two feet. Bones contain quantities of phosphorus, the element that puts that fine color into the petals of the flowers and gives finish to a well-grown rose. They also contain a large quantity of lime, also a little nitrogen, all of which are helpful in the development of fine roses. Charcoal has no fertilizing value in itself, but it has the power to absorb one hundred times its own volume of ammonia, and has the faculty of keeping the soil sweet. You can see that in the process of decay of the bones gases will be given off. If these gases are in excess of the needs of the soil the charcoal immediately absorbs it, and thereafter gives it off very slowly for the use of the plants.

If old manure be at hand a liberal quantity applied to the border in preparation will do no harm, but do not use manure that is less than a year old; cow

manure is the best. Fresh manure in a newly planted rose bed is a detriment rather than a benefit. After the plants are well established, then a top dressing of new manure will work no injury. The bed should be prepared just previous to its being planted.

Planting a bed of roses is not a serious undertaking. First, get your plants; place pegs in the bed at the points the plants are intended to occupy and dig holes deep enough and wide enough to comfortably accommodate the roots. A rose plant should not be set too deep. Fill in the soil and tramp firmly with the feet around the collar of the plant. Do not use water in planting. If the soil should be very dry, it may be desirable to give the bed a soaking with the hose, but on no account do this till the bed is all planted and the surface leveled and dressed up. If it is found necessary to water a bed after planting, it will also be necessary to thoroughly stir the surface of the soil as soon as dry enough—this to conserve the moisture. A hard, crusted surface evaporates moisture much faster and more thoroughly than does a cultivated or dusty surface.

Summer treatment will consist of a weekly cultivation of the surface of the soil, or, better still, in the spring put on a top dressing of decayed manure to the depth of six inches; see that it is not piled against the plants, for this sometimes causes decay to young canes, and even to old ones, by rotting the bark.

All the attention the top-dressed bed needs is to keep the weeds pulled out. About the time the buds begin to show, apply a top dressing of bone-meal, about one pound to the square yard of surface, and gently rake it in. If the bed be an old one—one that has been planted more than one year—it will require an application weekly of liquid manure; this



BRIDESMAID

Grown by J. A. Balmer, Cle Elum, Washington



THE BRIDE, BRIDESMAID, AND RICHMOND
A pink, white and a red. Grown by J. A. Balmer
Rosarian, Cle Elum, Washington

may be applied from the time the shoots are six inches long till the plants come in bloom. To prepare the liquid, take a bushel of fresh cow manure, or twice this quantity of horse manure, and put the whole in a barrel of water; stir well, and when settled it is ready for use. If you have a receptacle for catching urine in connection with your barn, the urine ought to be also used, but dilute this with twice its volume of water—for a dose too strong will bring down some of the mature foliage. Avoid potash salts and nitrate-of-soda as dangerous elements to use on roses. Chicken manure may be used in making the liquid, but not more than one-third the quantity recommended for the droppings of the cow and horse. All the material left in the barrel after exhausting the liquid may be applied to old roses anywhere about the place, or to asparagus beds, rhubarb, berries, etc. New material ought to be prepared for each application, and do not leave it in the barrel more than two days at a time, for excessive fermentation takes place and creates undesirable odors.

If you want the highest class roses, disbud all but the terminal on each shoot; if a show only is desired disbudding may be dispensed with.

Pruning is a question that has been threshed out hundreds of times, but the last word has yet to be said. The safest way for the amateur is to prune out only dead wood, or wood that is very



OUT WHERE ALL MAY ENJOY THEMSELVES

weak and straggling. Different classes of roses require a little different treatment in the matter of pruning. What are known as hybrid perpetuals require severe cutting back. Teas, and hybrid teas require very little pruning. Climbers of the rambler class are best treated by removing old canes and leaving the new, after the style of pruning blackberries. In whatever way you prune, don't do it till spring, after all danger of frost is past, for the plant needs the old wood to help mature the young. There is no dormancy in plants, only a little less activity owing to the season.

To fight insects and diseases, remember that anything that eats the leaves or buds must be killed by poison, and the best way to do this is to use some of the arsenate poisons. Some of the arsenate of lead preparations used by fruit growers, sprayed on of an evening and repeated, if necessary, will soon dispose of these pests. Green aphids, being a sucking insect, has to be gotten at in some other way. Kerosene emulsion or strong tobacco water will destroy them.

Mildew is a disease that is a little harder to destroy and is best fought with sulphur, dusted on the foliage at nightfall. Mildew is the result of stagnant air conditions and severe fluctuations in temperature—or rather, I ought to say, the spores of mildew grow most readily when these conditions are present. This is one reason we say an exposed position, also a sheltered one, is the best. Aim to grow mature plants, and mature them as you go. Overstimulation produces soft wood and off-colored flowers. Regular and consistent treatment, whether it be cultivation, feeding or what not, is always the safest course.

A paper on roses would be incomplete without a word about varieties, and yet this is the most difficult part of all, for tastes in roses differ. Varieties have their preference for soils; thus hybrid

perpetuals do best on a stiff clay; hybrid teas and ramblers in clay loam; teas, Chinas, Burbons, etc., can endure lighter soils, but all will grow fairly well in a clay loam. So, you will study your soil and other conditions before selecting your varieties. And, too, a list for this year might not be desirable for next, as new varieties are annually appearing, with claims for highest honors. A true rosarian will always be on the lookout



IMPROVED RAINBOW



PERLE DES JARDINS

for new varieties and will not be satisfied with anything but the best, and he cannot tell which are the best until he has tried them on his own soil, for what is best for your neighbor may not be best for you. As a rule those varieties so popular for winter flowers, as grown by the florists under glass, are not the best for summer work out of doors. The Bride, Bridesmaid, Richmond, American Beauty, etc., are not to be compared with La France, Caroline Testout, Ulrich Brunner, Kaiserin Augusta Victoria, Etoile de France, Maman Crochet, General Jacqueminot, and numerous others known to most people who cultivate a few roses.

I hesitate to recommend a list suited to any locality. As a rule, it will be best to get the plants as near home as possible, and the best are the cheapest in the end.

In mild climates fall planting will be found best, for the plants will have time to get well established in the ground before spring. In all places where the winters are severe spring planting ought to be practiced. Roses as received from the growers, and that have been in the open ground, are usually sufficiently pruned, and may be healed in the open ground or planted at once as circumstances permit. Small plants received from florists and that have been grown under glass should be carefully protected for a couple of weeks after setting, for it will be necessary to inure them to the



A PERFECT HEDGE, MADAME CAROLINE TESTOUT ROSES

weather. A few roses planted around your home will always be a source of pleasure; they enhance the value of the property and are as easily cared for as any other shrubs.

heart, hollyhock, phlox, London pride, lilies, gladiolus, dahlias and a host of annuals. It should be mentioned that the log house was literally covered by the trumpet vine and the honeysuckles. In spite of humble surroundings the home soon became the show place of the neighborhood, and its attractions are still among the most cherished memories of childhood days.

All this goes to show that an elaborate and costly house does not necessarily

VARIETIES OF ROSES AND ESSENTIALS IN GROWING

BY W. PADDOCK, COLORADO AGRICULTURAL COLLEGE, FORT COLLINS

THE writer spent his early years in a log cabin, and a beautiful home life it was. Surrounded on all sides by

dense forests of hardwood, no thought was given to preserving the timber, but how to rid the ground of it cheaply and

quickly was then a matter of considerable moment. It was with much regret, however, that we saw the forests gradually destroyed and the log house give way to a more pretentious one of frame. During the years of hard work while the land was being cleared and the farm developed, time was found to pay some attention to the needs of growing boys. An abundance of good reading matter was provided, and, what was of equal importance, flowering shrubs and plants were grown in profusion. Among the best remembered were lilacs, snowballs, mock orange, honeysuckle, flowering almonds, mountain fringe, trumpet vine, roses, peonies, bleeding



ROSE LA FRANCE



ROSES

make a home. And now that shrubs and flowering plants are so cheap, does not every man owe it to his family to see that they are not only provided, but that they are planted and well cared for?

But it is roses in particular we wish to call attention to in this article. They are not the difficult plants to grow that many have thought, and as there are now many fairly hardy sorts there is no reason why roses should not be much more plentiful. They can certainly be grown in any locality where apple and sour cherry trees thrive.

First of all, they should have a soil that has been well enriched with rotten barnyard manure. See to it that the ground does not become compact by frequent surface waterings and an infrequent use of the hoe. In fact, flowering plants require the same care that any other cultivated crop receives. Plants which are at least two years old will prove much more satisfactory than yearlings, as they have passed through the tender stage, and will produce a

number of flowers the first season. The planting should be done in the spring in Colorado, and at this time the canes

are cut back to three or four buds. Winter protection should be given to all roses save the hardy climbers. This may be the same as is given raspberries, simply bend the canes to the ground and cover them with earth. This is done about the first of November and the plants are raised when the weather becomes sufficiently warm the following April. Don't neglect the spring pruning. This will consist in cutting back the canes of most varieties to four or six buds. The dead and injured wood should, of course, be removed at the same time.

What varieties shall we plant? The list of roses is a long one, but only a small per cent of this number are sufficiently hardy to endure the climate. But in spite of this fact, there is still quite a list to choose from, so that we can only mention a few of the different kinds.

Red—Prince Camille De Rohan (dark), American Beauty, Gruss an Teplitz (dark), and General Jacqueminot.

Pink—La France, Helen Gould and Anna de Diesback.

White—Kaiserin Augusta Victoria.

Yellow—Franz Deegan.

Climbing—Crimson Rambler, Dorothy Perkins, Prairie Queen and Baltimore Belle.



IN A report by Alfred J. Fleming, United States consul at Yarmouth, Nova Scotia, dated March 6, 1910, it is stated that a Boston man who had just returned from a trip through the apple section of that province, contracting for the 1910 crop or some of it, says that up to that date the indications were that the crop would be an unusually large one, a record one, which means probably about 1,000,000 barrels. Last year was a short crop and 600,000 barrels were exported. Many new orchards will produce this year for the first time, and unless some unforeseen event occurs a record crop is promised, which will naturally lower the price. Apples choice at Yarmouth at this time retail at \$1.75 to \$1.90 per bushel, which is more than for many years at this season by 25 or 30 cents per bushel.



MEDFORD, ROGUE RIVER VALLEY PARADISE

FLOATS IN PREVIOUS ROSE FESTIVALS



WHITE LA FRANCE

ENGLISH NATIONAL ROSE SOCIETY—PRUNING ROSES

BY WILLIAM S. SIBSON, OF SIBSON ROSE NURSERY, PORTLAND, OREGON

THE National Rose Society, of England, includes in its membership the leading rosarians, not only of Great Britain but also of the world at large.

The growth of the society in recent years has been almost phenomenal, indicating thereby the rapidly growing interest in the cultivation of the queen of flowers. As late as 1900 the membership was only about six hundred, while at this writing some four thousand rosarians, professionals and amateurs, are recorded in its archives.

The gold medal of the society has become recognized and is accepted universally as a certificate of excellence in any new rose, so fortunate to be honored by its award.

The principal rose show of the society has been held annually in London since the year 1877. Its character and scope are truly national. Here may be seen the best grown roses of England, Ireland and Scotland, and here are first exhibited those new introductions which later become famous in the world of roses.

On the evening of the annual show, usually held the first week in July, her Majesty, the Queen, who is patroness of the society, with her attendants, is the first to pass along the exhibition tables, after which the general public is admitted.

Charges for admission are as follows: Noon to 3 p. m., \$1.25; 3 to 5 p. m., 60 cents; 5 to 7 p. m., 25 cents. Members of the society are entitled to certain free admissions and they may also purchase tickets at reduced prices.

In addition to this great rose show, there are about forty other exhibitions held during each season in various parts of the kingdom, either by the National Rose Society itself or societies that are

affiliated with it. The income of the society, which is derived from memberships, entrance fees to the rose

upon the many topics incident to rose culture. For instance, and to make these remarks practical and of some season-



AS A SPECIMEN BUSH

shows, special prize donations, etc., now amounts to some \$12,500 annually. Most of this sum is disbursed for prizes, printing, advertising, etc., so that the accumulated reserve and cash balance is not large, amounting at the close of the season of 1908 to about \$4,500.

The publications of the society, which are furnished free to members, are exceedingly valuable, comprising the results of the best and wisest experience

able current interest to local rose lovers who may read this paper, I will quote the introductory remarks of the handbook on the subject of pruning roses:

"The following general directions and explanations should be carefully read before proceeding to carry out the instructions afterwards given, or the reader may fail to grasp the meaning they are intended to convey.

"The late Rev. A. Foster-Melliar in his 'Book of the Rose,' pointed out that the necessity for pruning arises in a great measure from the natural growth of the rose. 'By watching,' he said, 'an unpruned rose tree, either wild or cultivated, it will be found that the first strong shoot flowers well the second season, but gets weaker at the extremity in a year or two, and another strong shoot starts considerably lower down, or even from the very base of the plant, and thus soon absorbs the majority of the sap, and will eventually starve the original shoot and be itself thus starved in succession by another. A rose in a natural state has thus every year some branches which are becoming weakened by the fresh young shoots growing out below them. This is one of the principal reasons why pruning is necessary. A rose is not a tree to grow onwards and upwards, but a plant in which the natural course every year or two forms fresh channels for the major portion of the sap, and thus causes the branches and twigs above the new shoots to diminish in vitality.

"This being the case, in order to maintain the strength of the plant and to keep



ROSE "FRAU CARL DRUSCHKI"

it in the shape required, the wornout shoots must each year be cut away, and the remainder left almost their entire length, as in the case of the climbers; or shortened back to a greater or less extent as the nature of the variety or the object for which the plant is grown may require. Pruning, therefore, is the art of improving the productive power and the appearance of the plant. It consists of two distinct operations: First, the removal of dead, weak, overcrowded or otherwise useless shoots. Unripe wood, which in the spring will usually be found to have discolored pith, caused by the winter frosts, should be cut clean away at the base of the shoot. Second, pruning proper, the shortening of those shoots which are allowed to remain after the thinning out process has been completed.

"The most frequent errors made in pruning are (1) leaving too many shoots when thinning out; (2) pruning severely the shoots of varieties which require little, if any, shortening; (3) pruning lightly the varieties which require severe pruning; (4) leaving rose plants crowded with shoots and cutting these to a uniform length all over the plant in a similar way that a hedge is clipped.

"In thinning out a shoot it should be either cut clean away to the base of the plant, or to its starting point on the older shoot from which it springs, as the case may be. When the plant has been pruned the shoots should be left as nearly as possible equi-distant from each other, and regularly arranged round it so that it presents a well-balanced appearance on all sides.

"When pruning a shoot it should always be cut to a dormant leaf bud, or 'eye,' as it is called, pointing outwards. In order to keep the plants in a healthy and vigorous condition, some of the shoots which are more than two years old should each year be removed to make room for younger and more vigorous growths.

"Roses require to be somewhat differently pruned according to the pur-

pose for which they are grown. For instance, shoots must be cut back severely if the plant be required for the production of exhibition roses, but if

after planting to reach its full size, and it is therefore during those first years that the plant has to be built up and its framework, as it were, formed.

"All roses the first time after planting should be pruned severely, that is to say, they should be cut down to within three or four inches of the ground. Even in the case of strong-growing climbing varieties, only the strongest shoot should be left more than one foot in length.

"Roses planted in the autumn should be pruned in the following spring, and if planted in the spring should be pruned at the time of planting.

"After the first year they should be pruned in accordance with the instructions which are given here:

"In pruning roses for ordinary cultivation or for decoration of the garden the following rules may be laid down, which apply to all:

"All dead and unripe shoots must be cut clean away to the base whence they started.

"In shortening the shoots always cut to an 'eye' pointing away from the center of the plant.

"Summer-flowering roses (those which bloom only once in the season) generally need thinning and training rather than hard cutting, and last year shoots should be left long, two-year-old shoots rather shorter, and the three-year-old shoots shorter still.

"The same thing will also apply to a great extent to perpetual flowering roses, but in their case too hard pruning will not destroy, but only defer the season's bloom.

"Climbing roses should have some of the older shoots cut away entirely each year, directly after the plants have flowered in the summer, and the young shoots lightly tied in to take their place."



CAROLINE TESTOUT
Grown by B. L. Baucom, Portland, Oregon

for ordinary garden decoration the shoots must be left longer; if to form bushes they must be left still longer, and if to clothe pillars, arches, etc., some of the shoots will scarcely require shortening at all.

"To cut down rose plants as is advised in the following pages in order to obtain exhibition blooms, may seem to the beginner likely to endanger the life of the plants, whereas in practice the harder the shoots are cut in the spring the stronger will be the new growths made during the summer.

"When pruning a rose for the decoration of the garden it should be borne in mind that it is a decorative garden plant, whether it be the large bush or pillar to stand alone, or the dwarfed kind to be massed with others in a bed. As a large range of kinds is available for decorative purposes, it is necessary in pruning, as will be seen by the instructions which follow, to take into account their individual habits and requirements.

"A large and strong-growing rose usually requires some two or three years



IRISH ROSE
"BETTY"



ROSE "LYON"

CULTIVATING THE ROSE—THE QUEEN OF FLOWERS

BY GEORGE C. ROEDING, FANCHER CREEK NURSERIES, FRESNO, CALIFORNIA

AMONG all the flowering shrubs that grace the garden or add to the beauty of hall or conservatory, none can compare to the rose. Of diverse color, and character of foliage, of endless design and color of blooms, it lends itself to a wider range of decoration than any other single group of plants, being equally desirable as pot plants, for garden culture, and for cut flowers. When to these qualifications are added ease of culture and quick and ample responses in flowers, it is explained why the rose has been aptly termed "The Queen of Flowers." In our collection of ornamental and flowering shrubs it occupies first place, hence we have been careful always to have on hand a large stock of only the most vigorous plants, and only those sorts which produce freely of blooms possessing good substance and strikingly individual characteristics. All our roses are field grown, thus insuring plants of strong constitution and robust growth. Some objections have been expressed to budded roses, owing to the fact that the plants are apt to sucker. This is readily overcome by setting the junction of the bud with the stock under ground. If planters will observe to do this, much of this difficulty will be removed. These shoots or suckers are easily distinguished by their rampant growth and thorny and coarse-like appearance. They should be removed as fast as they appear. Budded roses grow far more vigorously than those on their own roots and are longer lived, so that the slight additional expense incurred to begin with is more than compensated for in having superior plants.

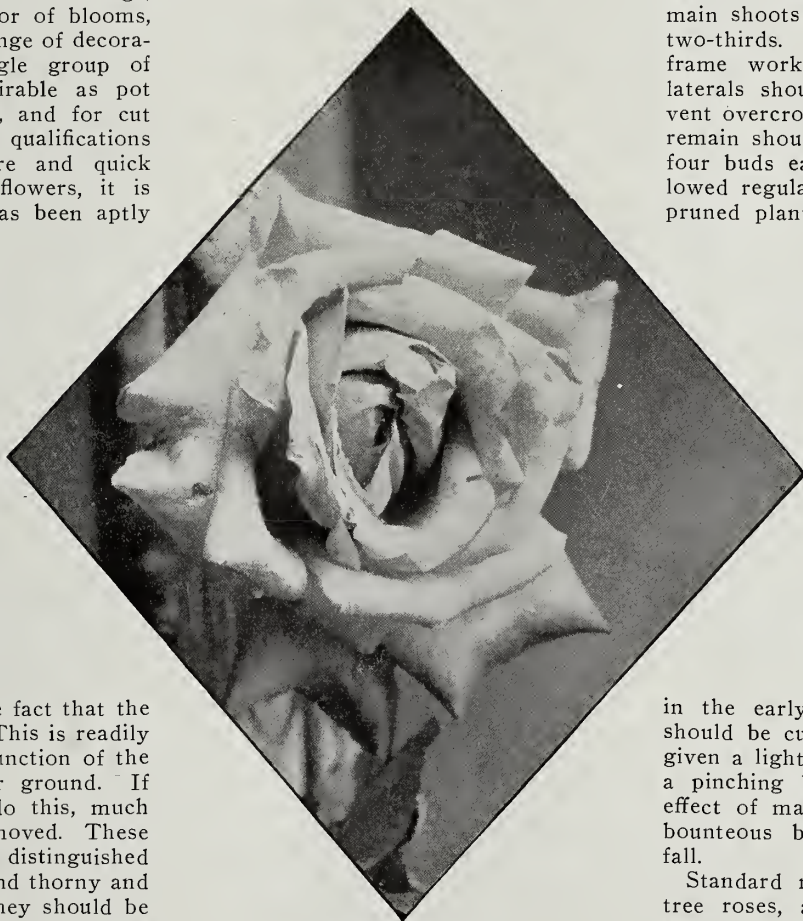
The aim has been in giving descriptions of the different varieties to be conservative in statement and clear in expression, preferring at the same time

There is one fast rule, however, on the Pacific Coast, and that is never to allow roses to go unpruned. The best time is from December 15 to March 1. The first winter after planting, thin to three main shoots and cut these back at least two-thirds. In after years with the frame work branches established, the laterals should be thinned out to prevent overcrowding, and those allowed to remain should be cut to spurs of about four buds each. If this method is followed regularly each season, a properly pruned plant will have the shape of a deer's antlers. With climbers the framework branches should be trained against the wall in the shape of a fan, leaving not more than three or four, and these should be cut back quite severely the first two seasons to promote vigor and sturdiness of growth. In after years shorten in the laterals and thin out sufficiently to prevent overcrowding, otherwise the plant will be a mass of dead wood and twisted branches, and its vigor will become impaired. When the roses cease blooming

in the early summer, the faded buds should be cut and the plants should be given a light pruning, or more correctly a pinching back, which will have the effect of making them respond with a bounteous bloom in the summer and fall.

Standard roses, commonly known as tree roses, are budded on a vigorous Manetti rose stock three and a half feet from the ground. They are very effective and if the head is shortened in and thinned out the plant becomes very symmetrical and responds with a wealth of bloom which is surprising. The first two seasons, wrap the stem with paper or burlap to prevent sunburn and cut away all suckers appearing below the crown.

Set the bush roses two to two and a half feet apart; standards four to six feet apart; for hedge purposes two feet apart except the Polyantha types, which are more dwarf in their habits and permit of being more closely planted.



MAMAN COCHET

to be modest in opinion rather than to over praise. In habit of growth, blooming qualities, vigorous root development our plants are the delight of rose lovers and home gardens. The inexperienced are advised to study the cultural directions, which are based on California conditions, and hence will be quite sure to afford satisfactory results if carefully followed.

The best season of the year for planting roses is from December 1 to March 15, with the recommendation in favor of early planting. In planting the same care should be observed as with any other tree or plant, the ground should be spaded thoroughly, and if any well-rotted manure is available, it should be worked into the soil. Dig the hole large enough to receive the roots. Prune the top, cutting back the branches at least one-half, and thinning out those that are too thick. The roots should also be cut back one-half, and all bruised roots removed. After planting settle the soil around the plant by watering freely.

No definite rule can be laid down for pruning roses except that Teas and their allied families do not require as severe pruning as the hybrid perpetuals and others of equally as vigorous growth.



"GENERAL McARTHUR"



CLIMBING KAISERIN AUGUSTA VICTORIA

THE GROWING AND CULTIVATION OF DAHLIAS

BY RALPH R. ROUTLEDGE, PRESIDENT ROUTLEDGE SEED & FLORAL COMPANY, PORTLAND, OREGON

FEW people realize what great improvements have been made in dahlias in the past few years, or to what an enormous extent they are

ors, but many frequently have shaded tips and petals, generally quilled.

Fancy dahlias include nearly all variegated varieties of the above, although the lines are not definitely drawn between the show and fancy varieties.

Ponpon dahlias embrace the small, old-fashioned, miniature dahlias, the plants of which are generally of dwarf habit; flowers round and double, profuse bloomers.

Paeony flowered (see illustration) is one of the newer classes, rapidly coming into popular favor. Flowers of immense size and have two or three rows of petals. Profuse bloomers and are very showy.

Single dahlias have but a single row of petals.

Selection of Grounds—The dahlia is a flower which will succeed even under adverse conditions, and it is, therefore, easy of culture; but there are always points which, when considered and followed, will prove that you can grow a flower better if you give it the spot it likes. It is a well-established fact that near the seashore one can grow dahlias to perfection with little or no care. The Western parts of Oregon and Washington are especially adapted to the grow-

that formerly has been in grass or clover, or in a light, sandy soil. If the soil that you want to plant in is too heavy, it may be easily improved by



now being grown. During two informal displays made in Portland last fall, the writer had an opportunity to hear the exclamations of surprise and wonderment caused by the magnificent flowers. Few realized that such delicate colored, yet large and beautiful, blooms could be so easily raised out of doors.

The cactus dahlia was the official flower at the late Alaska-Yukon Exposition. The New Holland paeony flowered type is among the latest introductions.

There are now over 2,000 named dahlias catalogued, comprising cactus, decorative, show, fancy, ponpon, paeony flowered and single flowered types.

Classification of Dahlias—Cactus dahlias (see illustration) are distinguished by their long, twisted or pointed petals. The flowers resemble chrysanthemums in general appearance. This is the most popular type today.

Decorative dahlias (see illustration) include all loose flowering varieties and those with large, flat petals. Some of the new introductions in this class have flowers over seven inches across.

Show dahlias (see illustration) apply to those varieties producing large, well-formed flowers showing only solid col-

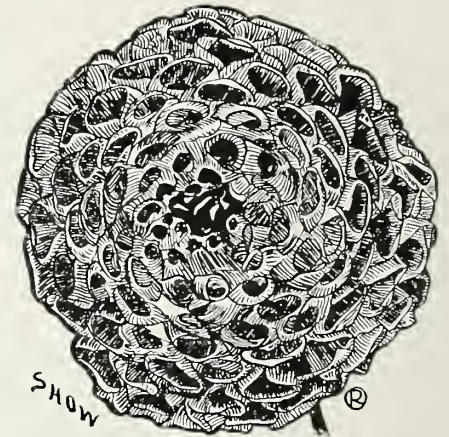


ing of dahlias. It seems as if the cool, moist nights during the latter part of August bring forth the flowers to their greatest point of perfection. That does not say, though, that dahlias will not do equally well inland, for they do, but they require a little more care.

Dahlias must have an open, sunny position. They grow rank and produce few flowers in the shade. Protect the plants by staking, so that the fall rains and wind will not break them down just when they are in the height of bloom.

Soil—It is an erroneous idea to believe that the dahlia is a gross feeder and requires well-manured soil, for that is just the opposite.

It is true that the dahlia requires a certain amount of plant food during its flowering season, but it can be better applied from the surface later, instead of imparting it to the soil before the roots are planted. The greatest possible success with dahlias can be had if they are planted on entirely new soil

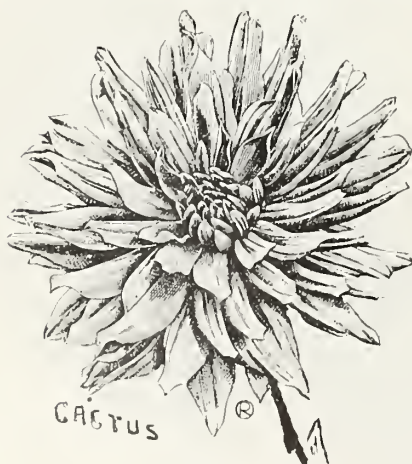


spading in either sand, ashes or leaf-mould.

General Garden Culture—In the first place, I wish to state that it is absolutely wrong to plant an entire clump of dahlias. All that should be planted at any time is either a single tuber, with a sprout attached, or a set of tubers which has only one sprout.

If the old roots from last fall are carried over, and it is the desire that they be planted, place the clump in a warm location, either in moss or soil, during the middle of March and have same thoroughly moistened; the sprouts will soon appear. Just as soon as they are noticeable it is well to divide the clump. The easiest way to do this is to make first one single division through the center of the main stem and crown. Then take the separated parts and divide them again in the same fashion. There must be a piece of the old stalk attached to each tuber or cluster of tubers, and do not plant until they show a sprout.

Whenever a single tuber can be detached with a sprout attached, this should be done, and this by far makes the best plant for garden use. A small bulb or tuber is equally as good in every way as a large one. During later years the demand for dahlias has increased to such an enormous extent that it has been simply impossible to increase the stocks of dry roots enough to supply all, particularly of the choicest and



NEW PEONY DAHLIA

newer sorts. In some instances, where the introduction has been so recent that it is simply impossible, on account of the high price and scarcity of dry roots,

to be gained by planting dahlias too early, for the fall flowers are the choicest and they are then in perfection when roses and other flowers are scarce.

Garden dahlias do not require more than three feet of space between the plants. In planting, the roots should be laid horizontally, three inches below the surface, and again I wish to advise not to place any manure or fertilizer in the soil during the time of planting.

Just as soon as the sprouts appear above the surface, the ground around the plants must be cultivated. This should be done regularly.

If the plants are bothered by cutworms, use "Bug Death," procurable at the seed stores.

Stakes should be applied as soon as the plants are large enough to be tied to the same. Certain plants have a tendency to branch out too freely, and it is advisable to have some of the branches removed, so as to allow the light to strike all parts of the plant. If the weather is unfavorable and rain not abundant, it is essential that the plants be thoroughly watered. This should always take place after the sun has disappeared, and it is then well to spray the foliage as well as the soil.

When the plants have attained a height of twelve to eighteen inches, it is time to apply fertilizer. Commercial fertilizer, worked into the top soil, is advisable. Wilgrow is especially good. A layer of thoroughly rotted stable manure may be placed around them, and this should be thoroughly watered every day. Grass clippings will serve as a mulch to keep the ground from

drying out. As the plants continue to grow, tie them carefully to the stakes which have been placed, and when the first buds appear, pick them off, as invariably the plants are too weak to produce perfect blossoms. Dead flowers should always be removed promptly, so

as not to waste any strength of the plant. To produce exhibition flowers, disbud, and do not allow the foliage to get too thick in the center of the plant. Some varieties of dahlias are especially valuable for cutting for bouquets, some for hedge purposes, and others for exhibition. I have found some varieties that are made the most of in foreign and eastern catalogs to be of little value

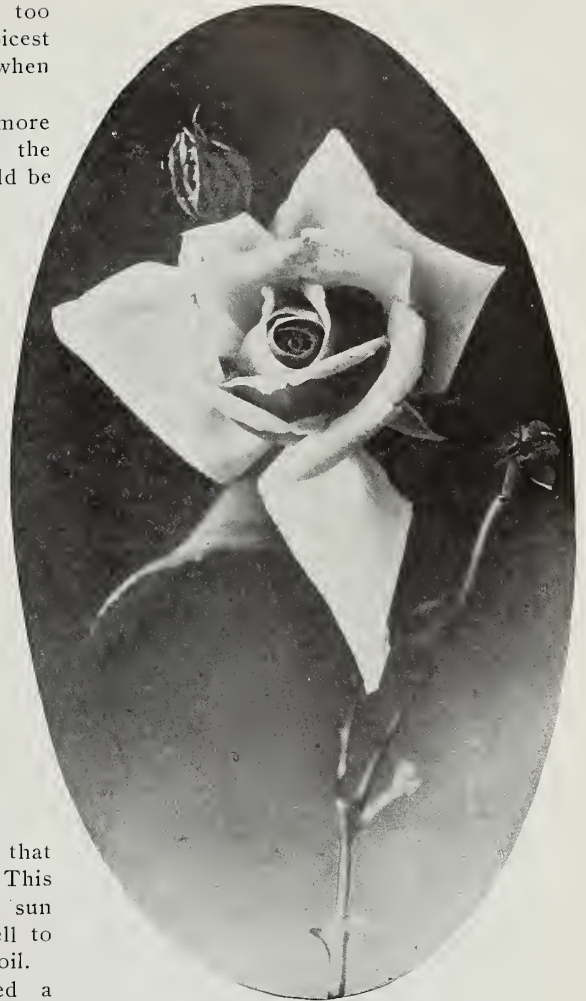
here, and my advice is to get your stock from western growers, who can supply and advise you as to the best varieties to plant for the purpose for which you want them.



R. R. ROUTLEDGE, PORTLAND, OREGON

the grower is compelled to offer plants made from cuttings made in the greenhouse. The result of plants is fully equal to the field-grown tuber. Many expert growers claim that the plants produce more and superior flowers.

The time of planting should be from April 1 to July 1. The later plantings often prove the best. There is nothing



"BELLE SEIBRECHT"



SINGLE CHEROKEE ROSE

FLOWERS AND SHRUBS FOR THE HOME GROUNDS

BY A. BOWMAN, PORTLAND SEED COMPANY, PORTLAND, OREGON

WITH the passing of winter our ambitions receive new impulses and our mental and material makeup feels the vitalizing, impelling forces of nature that bids us to be "up and doing."

Let us foster this inherent impulse that finds its best expression in the betterment of things around us—that leads the true lover of nature to turn instinctively to the cultivation of the soil, to the care and development of our gardens and flowers, and thus do our full duty toward beautifying our homes and adding to their value and attractiveness.

It is to be presumed that those interested have one or more of the splendid catalogues that are furnished free by seedsmen, as it is the sense of this article to direct your attention to those flowers and plants of easy culture that give you assurance of best results, rather than to go into cultural details, the space limitations allowing only generalities. The following suggestions are offered for Portland and vicinity as a general guide for amateurs, and if we would have our grounds and gardens to appear to the best advantage and give us satisfactory results, we must turn our attention quickly to their needs, for plants, like

time, "wait for no man," and the owner of a garden knows that in the early spring no day should be lost.

With the breaking up of winter we must look carefully over our grounds for winter-killed stock, prune out the dead wood and old growth where necessary, and outline our future plans, beginning by spraying thoroughly all deciduous trees and shrubs, including roses, with lime and sulphur, or scalecide. Careful spraying now will make the use of Bordeaux mixture unnecessary.

Right here let us resolve to do nothing in an aimless or haphazard manner. No matter how small our grounds or simple our plans, we should always work with the understanding of what we expect to accomplish. Good seeds and plants are not expensive, and only named varieties should be grown, and these marked so that we may profit by our experience.

But, to turn to the practical work that confronts us. Let us begin with fertilizer, to the magic influence of which we are indebted for our most beautiful flowers and bountiful crops. Our roses, hedges, shrubs and vines should have liberal applications, as early as possible, so the spring rains can carry the available plant food down to the tiny rootlets. Just a note of warning about the placing of fertilizer directly in contact with the roots of the plants. This must always be avoided. Place it near, but not against. Even the old, well-rotted stable manure will do harm sometimes unless properly applied.

Well-rotted stable manure, with four or five shovelfuls of bone meal to a barrow-load, will prove a most excellent fertilizer for all general purposes for lawns, flower beds, roses, shrubs, etc. But for hastening growth, preventing weeds and correcting deficient soils the chemical or "commercial fertilizers," as they are called, are much to be preferred. These can be obtained from the seed houses under the guaranteed analysis required by the state law. A 100-pound bag contains more plant food than a wagon load of stable manure, and has no unpleasant odor.

Among the beautiful, hardy shrubs that require little attention let me call to your notice a few that grow to perfection with us. They are all easily obtainable and not expensive.

The well-known althea or rose of Sharon flowers freely during August and September, when few other shrubs are in bloom. It has beautiful double flowers, pink and white, or purple.

Azaleas are most gorgeous, ranging in color from intense crimson to lemon yellow. They

are covered with bloom in early spring, before their leaves appear. They are compact, symmetrical and can now be obtained on standards like tree roses.



MADAME CAROLINE TESTOUT

Double flowering hawthorne, red or white, bloom profusely and are shapely, attractive trees.

Deutzias have masses of snow white flowers sometimes tinted rose; they are early bloomers.

Genista, or Scotch broom, is a favorite.



CLIMBING PERLE DES JARDINS



UNPRUNED AND PRUNED ROSE BUSH
The figure to the right shows how to prepare the rose for planting

Forsythia, or golden ball, has graceful, drooping, yellow flowers.

Hydrangea *Paniculata-Grandiflora* is the most popular and valuable of our hardy shrubs. Its immense panicles of white, faintly-tinted pink blossoms last for a long period.

There is now offered the new "snow-ball hydrangea" (*arborescens alba grand-*



KAISERIN AUGUSTA VICTORIA

flora), flowering through July and August. The flowers are large, snow-white and very attractive. Either as specimens or for cut flowers this is very desirable, as it comes into bloom directly after the passing of the spring flowering shrubs.

Magnolia grandiflora, the evergreen type, is the best of the many magnolias.



ULRICH BRUNNER ROSE

It grows beautifully here and is a grand sight. It is our earliest bloomer.

The tiny Japanese maples are effective in clumps on lawns. They make an early showing that cannot be surpassed. For late April blooming the *Philadelphus* or mock orange flowers in great profusion and is indigenous. It should be in every garden.

Spiraeas come in great variety, *S. Thunbergi* being the earliest. The foliage is yellowish green, and the flowers white. *S. Prunifolius*, bridal wreath, is a pretty double white flower in clusters, coming out in April. *S. Van Houtte* is the grandest of all the *spiraeas*. It is a beautiful ornamental plant and when in flower is a perfect fountain of white bloom, flowering in May.

Then we must not overlook the lilac, in purple and white. Double varieties are the best. And the snowballs, of which the Japanese varieties are to be preferred.

Of the many beautiful climbing vines that grow well with us, not to mention roses, the wistarias are best for second-story effects and can be had in purple, lavender and white. Their immense, drooping racemes of bloom are truly a grand sight. The large flowering *clematis* in purple or white grows to a perfection that astonishes the visitors from other less favored sections. The *clematis paniculata* is one of our best quick growing vines for shade or covering walls. It will thrive on the north side, where other kinds would not live, and has fine feathery white flowers in the fall. The Boston ivy, with its glorious autumn coloring, cannot be excelled for brick or stone walls, attaches itself, and will thrive in any soil. English ivy, Virginia creeper, myrtle, honeysuckle, all grow to greatest perfection.

One opportunity we neglect, and that is the lilies. No one seems to realize their grandeur or the possibilities they offer. The magnificent Japanese varieties are truly wonderful and need no attention whatever. In fact, they should not be disturbed for years. They may be planted in clumps, in borders along drives, or in the foreground of evergreens. They must be seen to be appreciated. Their ease of culture and the perfection they attain in our climate make it the more remarkable that they

are not more generally cultivated. We have our own native *Lilium Washingtonianum* or Mount Hood lily, which is very attractive but does not approach the Japanese varieties. Plant a few of these in some corner where they will not be disturbed. The *Auratum* or gold banded is the best known, but the *speciosum* varieties are the most wonderful. They give flowers through the summer when most needed. Our earliest lily is the white *candidum*, and is grown extensively in this country. This variety is obtainable in the early fall.

Another much-neglected flower that has been wonderfully improved is the *gladiolus*. This has been developed into magnificent types of rare beauty and is fast becoming very popular. They grow and flower with the least attention, coming on in midsummer and lasting until frost. They keep better than any other cut flower.

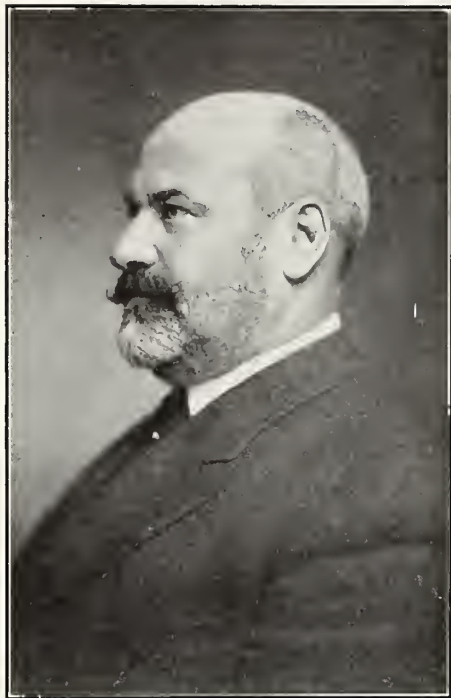
Spanish, English and German iris will also prove a revelation to many. They are inexpensive, grow in any good garden soil, and have marvelous beauty of form and coloring. This is also true of the immense Japanese varieties, which defy all attempts at description that would convey a correct impression of their real coloring and beauty. Use in the border or for bedding.

Dahlias are well known to all of us and pages might be written to describe their



PAPA GONTIER

wonderful advancement into types and colors never dreamed to be possible, and they are now one of the "flower fads" of the times. Don't let the season go by without planting the cactus and paeony flowered types, but don't plant too early. Better flowers are to be had



A. D. CHARLTON
A. G. P. A., N. P. R. R., Portland, Oregon

from plants that flower late, as the dahlia is essentially a fall bloomer.

Cannas are now to be had in fine new flowering sorts and give splendid tropical effects. The time will soon be when cannas will be grown for the effect of their brilliant flowers as well as their foliage, better secure the plants which can now be obtained, as they give better satisfaction than bulbs in our section. The season for planting the Dutch and French bulbs is now past and if you



WILLIAM McMURRAY
G. P. A., O. R. & N., Portland, Oregon

failed to secure a supply of these beauties you will soon envy your more fortunate neighbors.

Paeonies in many sections rival the rose. Of course, it would not do to mention anything in comparison with Portland roses, but paeonies are noble ornaments for a lawn, free from insects and disease. They flower through a long season and for delicate beauty of coloring cannot be surpassed. They are improving every year, and have much to commend them.

The alternate freezing and thawing of winter leaves its visible effects on our lawns and they should be promptly attended to. A dressing of bone meal is one of the most economical and satisfying fertilizers to apply at this time. Re-seed the thin spots and roll down firmly. A lawn properly made can be maintained by rolling, re-seeding and fertilizing, for a number of years, but if through lack of attention it has to be made over, early spring or early September is the best time. Light, daily sprinkling causes the roots to seek the surface where the hot sun soon dries them up. Water less often and wet down thoroughly so the grass will root deeply.

As soon as the ground can be worked, which is indicated by its crumbling away from the shovel, we must go over our beds and borders, working them deeply. When the ground is turned up and left in the rough throughout the winter it is in better condition and can be worked much earlier.

Plant your sweet peas first just as soon as you can get them in the ground, for earliest plantings give finest flowers. The grand new types of sweet peas, with their great wealth of immense, fluted and waved flowers of new and exquisitely beautiful coloring, are of such easy culture that anyone can succeed with them. They prefer a cool, moist soil, well drained, and should be planted in a little trench three or four inches deep, putting the seed two inches below the bottom of the trench, and as they grow drawing the soil around them until the trench is filled level with the ground. Thin to four or five inches apart. Keep the ground well worked, cut the flowers close to prolong the blooming season, and an occasional thorough soaking is better than a daily sprinkling.

Among the earliest and most satisfactory of our annuals are the poppies, in all their wonderful variations. They are perfectly hardy and germinate freely. Plant as early as the ground can be worked. Sow them thinly where they are to grow. They should not be closer than three or four inches each way. They last for three weeks or more and can be followed by aster plants, working the beds over and applying a little fertilizer when transplanting the asters, and a little more just before their season of bloom. There are many grand new strains of asters that rival the chrysanthemum, and they are one of our most satisfactory annuals. Seeds should be sown indoors in March,

but it is a better plan to obtain the plants in season from the seedsman or florist.

Among the hardy annuals that can be readily grown from seeds are asters, ageratum, alyssum, coreopsis, calendula, candytuft, cosmos, lobelia, mignonette, marigold, nicotiana, pansies, nasturtiums, phlox drummondii, petunias, pinks, salvia, stocks, salpiglossis and sunflowers. Plants of all these can be purchased in season and give more satisfactory results, coming on quickly.

We are not going to talk about roses this time, only to say that Portland enjoys the distinction of having the most discriminating and up-to-date rose trade of any city in the United States, and a greater variety of new continental roses are grown by amateurs and listed by local dealers than are to be found in any other section of the country.

And just a word in conclusion about these same dealers. It is best to patronize your local seedsman, who has studied your conditions and requirements, and whose success depends on his painstaking care in listing stocks that are known to be adapted to the soils and climate of his section. For let it be understood that everything will not grow to perfection even in our ideal climate, and we should confine our efforts to those varieties that offer the greatest assurance of success.

THE thirty-fifth annual convention of the American Association of Nurserymen will be held June 8, 9 and 10 at Denver, Colorado, with headquarters at the Brown Palace Hotel. This will be a very interesting meeting, and all nurserymen who can possibly do so should attend. Full particulars by addressing John Hall, secretary, 205 Granite Building, Rochester, New York.



TOM RICHARDSON
Manager Portland Commercial Club

HOW TO FIX UP THE YARD—WHAT TO PLANT

BY H. F. MAJOR, INSTRUCTOR IN LANDSCAPE GARDENING, AGRICULTURAL EXPERIMENT STATION, URBANA, ILLINOIS

REMEMBER these few things about shrubbery: First, an eighteen-inch shrub may be a well-developed, handsome specimen or it may be a "whip"—i. e., just a single stalk, and the variance in price found in different catalogues will be accounted for in this respect.

Second, be sure to see whether the goods are sent f. o. b., or by express, and who pays the extra charge. It is often more economical to buy the higher priced plant.

Third, don't select something that no one ever heard of or saw before, just because it is a "new and wonderful variety exceedingly more floriferous than the common shrub."

Choose, regardless of any slighting remarks, the good old species, which have stood the test of a thousand years and which today furnish the root and basis for all the horticultural freak varieties that bring fancy prices and which deteriorate to nothing after a year or so of crowded and profusely vulgar bloom.

Sometimes there is no description, except the color of the flowers given,

and you might guess at the wrong one, so for convenience sake we might list the best shrubs for the door yard in several groups according to classification and refinement.

In planting we should always leave a wide, open lawn; plant the outer border heavily with a mass of rather dense shrubs, thereby attaining a sort of privacy on your grounds and maintaining a definite form and outline to your property. Plant also with a more refined class of shrubs against the foundations and corners of the building and cover the front porch with a few good, clean vines.

In the border plantation use the less refined plants farthest away from the approach; use a variety of kinds, but enough of one type in a place to produce a definite effect of light, shade, color—flower or fruit. We have shrubs which are good all the season through. The flowers are by no means the only beautiful things in nature. There are the bright leaves in spring and fall berries, some of which hang on all winter.

Others are evergreen, or semi-evergreen, and in many cases the fall color of the leaves is astounding. Don't forget that there are many different shades of green in leaves, which when mixed are exceedingly interesting, while variations in bark color and type are as good as a collection of museum curios.

To begin with the porch and entrance, let us make a list for future reference. Porch vines needing artificial support, valuable for their shade, giving flowering or fruiting qualities. Start out with the sizes quoted to get the best effect: Hall's climbing honeysuckle, two years old; Japanese clematis, two years old; crimson rambler, two years old; Dorothy Perkins rose, two years old; wisteria, two years old. For rear and side porches: Matrimony vine, trumpet creeper, scarlet honeysuckle, bitter sweet and Virginia creeper. Buy two-year-old vines, and in the case of the roses be sure they are on their own roots, not grafted.

Shrubs fall into three classes in regard to height. First, low, dwarf shrubs, in full development, growing seldom over two and a half feet high. These should be planted about two feet apart. In this class we have: Holly leaved bar-



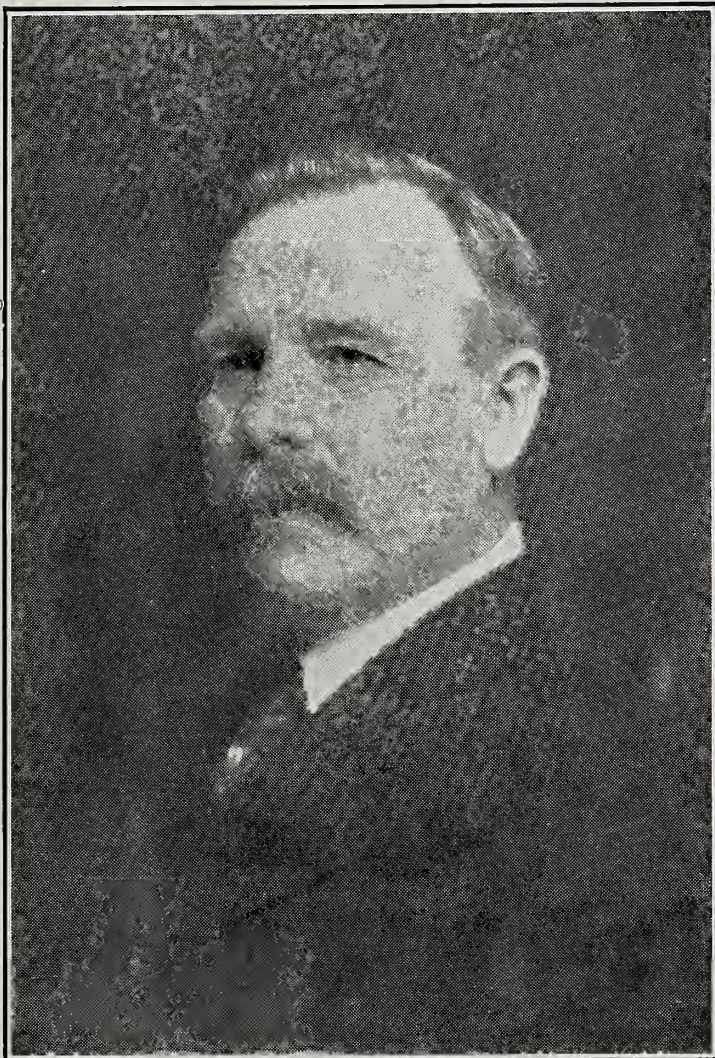
HARRY BECKWITH
President Commercial Club
Portland, Oregon
Courtesy Chamber of Commerce Bulletin

berry, dwarf deutzia, Japanese barberry, coral berry, spiraea Anthony Waterer. For this class of shrubs, where especial refinement is desired, hardy perennials are often substituted. The best varieties are: Independence (white), Etna (pink), Miss Lingard (white); German iris, phlox paniculata, peonies, funkia or Day lilies, spiraea Jap. or astilbe Japonica, Adam's needle or yucca.

The second or medium height shrubs are those which at full development attain approximately five to six feet, and are usually planted about three to four feet apart. This class includes: Weigela roseum, purple leaved barberry, mock orange, golden bell, yellow flowering current, Japan quince, sweet shrub, Deutzia Pride of Rochester, Regal's pri-



EDMUND C. GILTNER
Secretary Chamber of Commerce,
Portland, Oregon
Courtesy Chamber of Commerce Bulletin



WILLIAM MACMASTER, PRESIDENT CHAMBER OF COMMERCE
Courtesy of Chamber of Commerce Bulletin



SOME OF THE CHURCHES AND SCHOOLS OF PORTLAND, OREGON

vet. Van Houtte's spiraea, Japanese spiraea, bridal wreath, snowberry, tall bush cranberry, Japanese snowball, single Japan snowball, withe rod, Ramanan's rose (Jap), groundsel-tree, sweet pepper bush.

The list of shrubs just mentioned are usually mixed with and backed up by the third classification, which are plants which when full grown are taller than six or seven feet, but which do not reach the proportion or character of small trees. In this list we find lilac, large flowering mock orange, five-fingered aralia, common barberry, witchhazel, strawberry tree, Amoor's privet, buckthorn, red and black elderberries, smoke tree, arrow wood, wayfaring tree, sheep-

berry, arbor vitae (evergreen), red-twigged dogwood, hazel.

Small ornamental trees to be placed singly or in groups of three about eight feet apart among the shrubs in the border plantation: Red bud, flowering dogwood, staghorn sumac, white birch, maidenhair tree, smooth sumac.

Certain shrubs are of such a type that they should be used singly, as specimen plants. They are usually set a little out from the main mass of shrubbery into the border, which serves as a background to set off the specimen to best advantage. Of such shrubs we have hardy hydrangea, rose of Sharon, spindle tree, white fringe, flowering almond, hawthorn.

If the front lawn is small do not attempt to plant trees in it, and especially not right in the middle. However, on a wide, spacious lawn nothing is more desirable than a few groups of shade trees or single specimens placed a little to one side of the center line and near that portion of the grounds where shade is needed.

Some of our best ornamental shade trees are American linden, horse chestnut, American elm, tulip tree, hackberry, mossy cupped oak and others, sycamore, maple.

Don't scatter "shoe button" shrubs all over the lawn.

Don't have a round flower bed.

Don't have a Tea's weeping mulberry or any other weeping freak.

Don't have iron seats, dogs, rabbits, deer or other imitations on the place.

Never plant a box elder.

Don't plant a cottonwood unless you alternate it with a good slow-growing tree, with the intention of removing the cottonwood as soon as the other has fully developed.

Don't plant salvia against red brick wall.

Don't have terraces near the sidewalk. Grade from the house to the walk line with an even slope if possible.

Don't plant street trees near than thirty feet apart.

Don't get the "concrete craze."

Don't wait to "do something."

Have a flower garden in some secluded part of the yard and in it plant peonies, phlox, iris, delphinium and pompon chrysanthemums, if nothing else. Also have some annuals there, such as salvia, China asters, nasturtiums, geraniums.

Among your shrubs plant bulbs in clumps of half a hundred or more, such as daffodils, scillas, crocus, tulips, narcissus and lilies of the valley.

And last, but not least, set aside a little back corner in a sunny, wind-protected place at the end of a garden wall for a rose garden. Put here a little rustic seat and plant two each of the following kinds, about two and a half to three and a half feet apart: Ulrich Brunner, Madam Plantier, Baroness Rothschild, Paul Neyron, General Jacqueminot, Magna Charta.

Be sure that you get these plants grown upon their own roots, not grafted. An excellent early variety is Harrison's yellow rose.

Before you get ready to plant, sketch out your grounds and see where and what you are going to do—then go ahead and do it. It is often just as cheap to buy five of one kind at the price for ten as it is to buy two or three single plants at the price for each. Put two or three of one kind in a place and repeat the group in some other portion of your planting.

If there are some woods in the neighborhood, go collect some native specimens and mix them in your border planting. Send your list for quoted prices to several concerns and accept the best all round offer. Get your neighbor to do the same; get out a big list, get your plants cheaper and save on the freight. Fix up the place.

THE LIME-SULPHUR-ARSENATE OF LEAD MIXTURE

BY A. B. CORDLEY, M. S., DEAN OF THE SCHOOL OF AGRICULTURE, CORVALLIS, OREGON

IN an article in the issue of "Better Fruit" for March, 1910, the lime-sulphur-arsenate of lead mixture is discussed by Professor A. L. Melander, who, by an insinuation, an assumption and a single experiment has apparently convinced himself not only that such a combination is unnecessary but also that when it is attempted by the ill-considerate such disastrous chemical reactions occur that "a combination spray of the two contains neither of the original ingredients" and is inefficient, at least as a spray for codling moth.

Since I was not only the first to demonstrate the value of the lime-sulphur spray as a preventive of apple-scab, but also the first to recommend the lime-sulphur-arsenate of lead combination; and since I have not only successfully used and recommended it for the past three years but shall continue to use and recommend it until something better is discovered, it is apparently "up to me" to give some of the reasons for the faith that is in me. In doing so I shall be compelled to consider Professor Melander's article topic by topic, but feel that I may be pardoned for so doing owing to the importance of the subject, not only to a large proportion of the apple growers in the Pacific Northwest, but to those of the country at large.

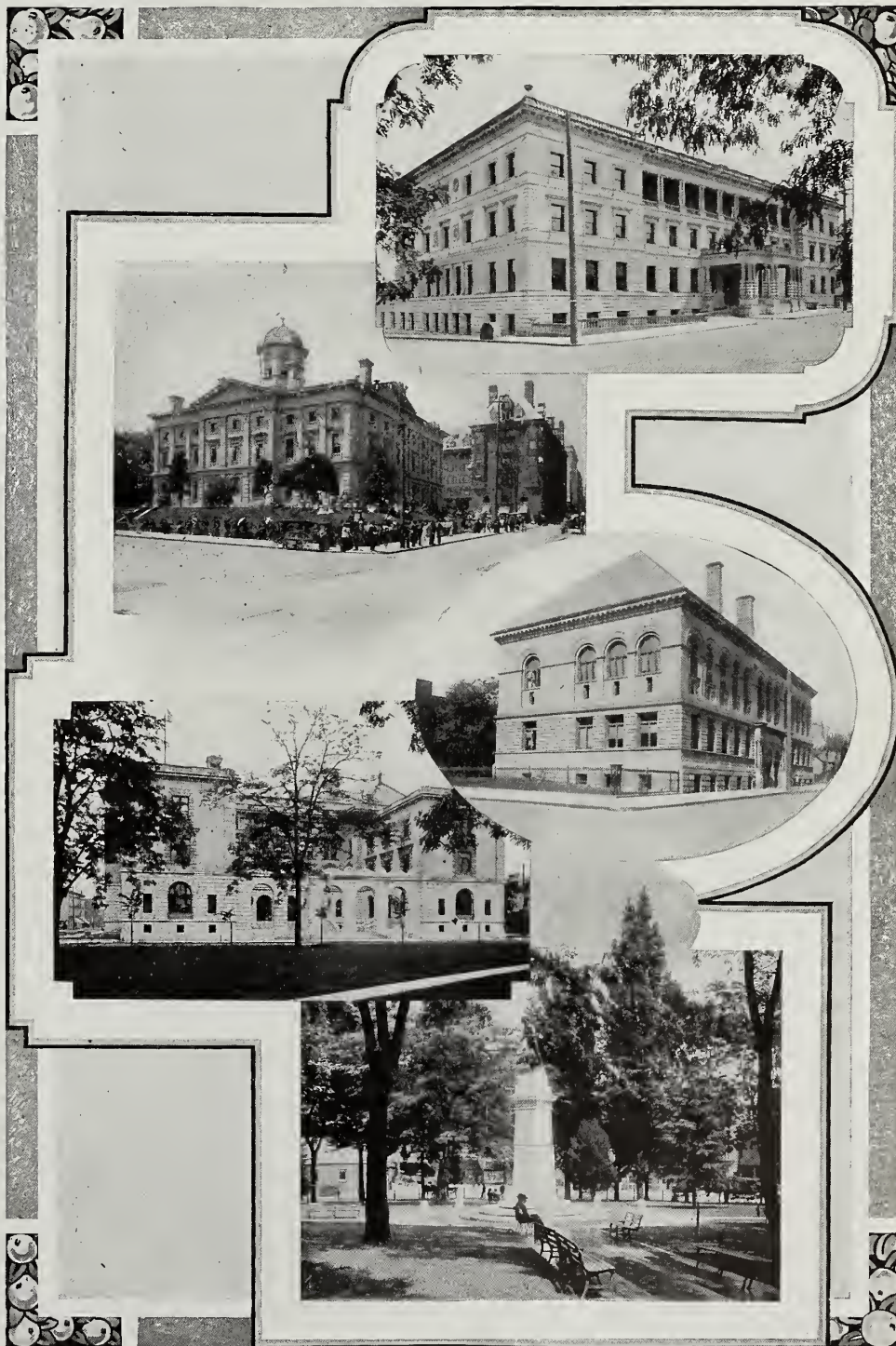
The Insinuation—Unfortunately, in discussing the lime-sulphur-arsenate of lead mixture Professor Melander departed from his subject long enough to briefly consider what he is pleased to term the "Oregon wash." The only apparent reason for this digression is to insinuate that a person so ignorant of chemical reactions as to recommend the addition of copper sulphate to the lime-sulphur spray could scarcely be considered a safe guide in anything; and since I have been the chief advocate of the lime-sulphur-arsenate of lead mixture, the insinuation is apparently aimed in the general direction of my desk.

I am compelled to plead not guilty for the following reasons: The term "Oregon wash," if used at all, should be used to designate the 50-50-150 lime-sulphur formula which was first recommended in 1896 by the late Emile Schanno, a member of the Oregon State Board of Horticulture, and which gave such good results in controlling San Jose scale that it was invariably recommended for this purpose by the Oregon Experiment Station and the State Board of Horticulture, until the efficiency of the commercial lime-sulphur preparations and the "stock solution" methods of preparing lime-sulphur was demonstrated. The lime-sulphur-copper-sulphate spray to which Professor Melander refers was originated by some of the orchardists in the Rogue River Valley, and for a number of years was very popular in that section of the state. It was never at any time recommended by the Oregon Experiment station, although the formula for it was published in Bulletin 75, entitled "Insecticides and Fungicides," with the following comment: "Further experiments are

necessary to determine whether the copper sulphate adds anything to the efficiency of these sprays."

Professor Melander states that "the fallacy of the Oregon spray could be explained by any high school scholar who has studied elementary chemistry"—and proceeds at once to explain it with approved high school erudition. In this connection I may be permitted to suggest that not only myself but many of the leading fruit growers of Oregon have known of the objectionable chemical reactions to which reference is made, for the past twelve or thirteen years,

and it was largely because of them that I never recommended the combination and that orchardists discontinued its use. Nevertheless, I saw no satisfactory reason for condemning a spray which gave good results. Not only extensive orchard experience, but considerable experimental work, notably that of Forbes, of Illinois, has demonstrated that the insecticidal value of the spray is not appreciably diminished by the addition of the copper sulphate. Whether or not its fungicidal value is materially affected is still an unsolved problem. I know of no experimental



PUBLIC BUILDINGS, PORTLAND, OREGON
City Hall (at top), Post Office, Library and Custom House

evidence to justify the statement that the "black precipitate that settles to the bottom of the liquid * * * has as much value as so much sand." Copper carbonate, ammonical solution of copper carbonate, copper acetate, the various copper sulphates, copper hydroxide, and even metallic copper, all are valuable as fungicides. It is, therefore, hardly probable that copper sulphide alone of all the copper compounds is of no more value than sand.

The Assumption—Professor Melander assumes, and so states, that when lead arsenate is added to a solution of lime-sulphur a chemical decomposition takes place, with the result that a "combination spray of the two contains neither of the original ingredients," and proceeds to demonstrate the assumption by some very creditable high school formulas, as follows: "The sulphur-lime (CaS_5 , CaS_3 and $\text{Ca}_2\text{S}_2\text{O}_3$) added to the lead arsenate—most of the lead arsenate on the market has the chemical formula (PbHAsO_4)—forms lead sulphid (PbS), arsenic disulphid (As_2S_2), arsenic trisulphid (As_2S_3), calcium arsenate ($\text{Ca}_3(\text{AsO}_4)_2$), and hydrogen sulphid gas (H_2S)."

For the time being, and for the sake of argument, let us assume with Professor Melander that the above reactions actually take place—that all of the arsenate of lead is decomposed and that the lead unites with sulphur to form lead sulphid (PbS), and all of the arsenic unites with the sulphur and the lime to form arsenic disulphid (As_2S_2), arsenic tri-sulphid (As_2S_3), and calcium arsenate

($\text{Ca}_3(\text{AsO}_4)_2$). What of it? The worst that can occur is to diminish the fungicidal value of the spray by the amount of sulphur which is withdrawn from solution to combine with the lead and arsenic, and to diminish its insecticidal value by the difference between the insecticidal value of lead arsenate and that of the same arsenic content in the form of arsenic disulphid, arsenic trisulphid, and calcium arsenate.

Assuming, then, that total decomposition of the lead arsenate takes place and that all of the lead unites with sulphur to form lead sulphid (PbS), we are brought face to face with the disastrous fact that all of the lead in two pounds of arsenate of lead (which we recom-

mend for each fifty gallons of spray) will withdraw from solution and actually cause to be wasted one-eighth of a pound of sulphur, which, at present retail prices, is worth about one-fourth cent. (If the Melander formula of one pound of arsenate of lead to fifty gallons be used the loss will be only one-half as great.) Orchardists who are enabled, thereby, to save an additional application by the addition of one-fourth cent's worth of sulphur to each fifty gallons of spray will not readily be frightened by even such a formidable array of chemical formulas as occur in the article in question.

Regarding the difference in insecticidal value between the lead arsenate and the arsenic disulphid, arsenic trisulphid and calcium arsenate, there is but little experimental evidence upon which to base a conclusion. Professor Melander admits that this question cannot be determined by chemical formulas and attempts to answer it by a single experiment in which "the spraying unfortunately had to be done with a worn-out pump, leaking hose, in a high wind, and with the tall trees and no tower from which to spray, with the branches of the trees interlacing and with a decidedly short crop," etc. Suffice to say that those of us who have had experience in spraying with various arsenicals like white arsenic, arsenite of lime (as used in London purple, or as prepared by the Kedzie or the Kilgore



HOOD RIVER
THE QUEEN OF HORTICULTURE

FLOATS IN PREVIOUS ROSE FESTIVALS



THE ROSE THAT
MADE PORTLAND FAMOUS

FLOATS IN PREVIOUS ROSE FESTIVALS

methods), paris green, etc., and who remember that these substances were discarded not because of their lack of insecticidal value, but because of their variability, or their injurious effect upon foliage, or some objectionable mechanical characteristic, may well be pardoned for holding to the belief that "a rose by any other name would smell as sweet," and that a given amount of arsenic in the form of arsenic disulphid, trisulphid and calcium arsenate has about the same insecticidal value as the same amount of arsenic in the form of lead arsenate; and our belief is strengthened by the results obtained in Colorado during the past season by Gillette, which indicate that even sulphid of arsenic (As_2S_3) is fully equal to lead arsenate as a spray for codling moth.

I am tempted to apologize at this point for using your space in discussing a mere assumption; for, as a matter of fact, the reactions which Professor Melander assumes to occur do not actually occur to any appreciable extent if the ortho or neutral lead arsenate be used. Professor Melander asserts that most of the lead arsenate on the market has the chemical formula PbHAsO_4 . Translated that means that most lead arsenates on the market are acid arsenates. That may be true in Washington but it is not true in Oregon. Of the seven brands of arsenate of lead sold in this state and of which we have accurate knowledge, three, viz: "Swift's," "Hemingway's" and the "Lion Brand" are acid arsenates; the

other four, viz: "Grassell's," "Bean's," "Sherman-Williams'" and "Star" are neutral or ortho-arsenates.

For the past two years I have cautioned growers against using acid arsenates in combination with the lime-sulphur. In the tenth biennial report of the Oregon State Board of Horticulture (1908, page 69) I briefly discussed this phase of the subject as follows:

"The various brands may, however, be arranged into two definite groups which may be termed the acid arsenates and the neutral or normal arsenates. While the evidence is not conclusive, it appears to be true that the acid arsenates have some tendency to injure foliage, and that

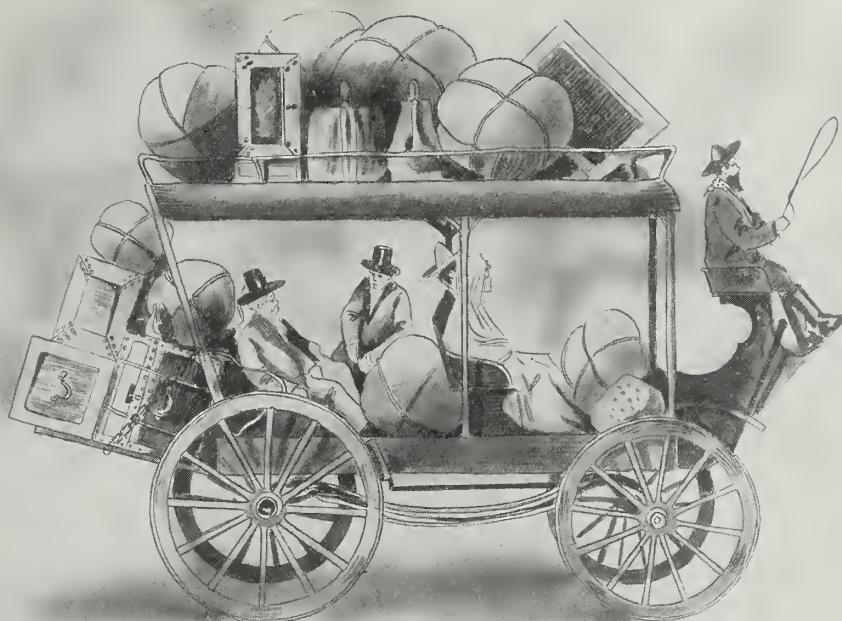
they cannot so well be used with the lime-sulphur solutions as can the neutral arsenates. While the available evidence upon the above points is not sufficient to justify one in condemning the acid arsenates growers are advised to use neutral arsenates whenever possible."

Since the above was published we have learned some very interesting facts regarding the arsenate of lead-lime-sulphur reactions.

On account of the complexity of the lime-sulphur solution, the reactions taking place and the exact products formed when arsenate of lead is mixed therewith are difficult to determine. Nevertheless, our investigations have shown that the polysulphids of the lime-sulphur solution consist of mixtures of the pentasulphid (CaS_5) and the tetrasulphid (CaS_4). On evaporation a more stable sulphid (CaS_2) is deposited. In addition to these sulphids there exist also small quantities of calcium thiosulphate (CaS_2O_3).

As indicated above, two forms of arsenate of lead are found on the market, namely, the neutral or ortho arsenate ($\text{Pb}_3(\text{AsO}_4)_2$) and the acid arsenate (PbHAsO_4). By far the larger proportion of arsenates used in Oregon is of neutral form.

When lime-sulphur and lead arsenate are mixed, varying quantities of lead sulphid, free sulphur and calcium arsenate are formed, "depending (not so much) upon the composition of the sulphur-lime solution" as upon the form of the arsenate used. Hydrogen sul-



WELLS-FARGO MAIL & EXPRESS

FLOATS IN PREVIOUS ROSE FESTIVALS



THE FIRST HOUSE IN PORTLAND

FLOATS IN PREVIOUS ROSE FESTIVALS

phid gas (H_2S) is not liberated in the reaction, nor are sulphids of arsenic (As_2S_2) or (As_2S_3) formed. Indeed, sulphids or arsenic cannot exist in a lime-sulphur solution except when present in excess, as they are soluble in this medium and react to form sulpho salts, namely, calcium-sulf-arsenite and calcium-sulf-arsenate; and sulpho salts are not found in a mixture of lead arsenate and lime-sulphur.

That there is a marked difference between the reaction of the neutral and the acid arsenates when they are combined with lime-sulphur may be readily seen by even a physical examination of the residue in each instance. The resulting acid arsenate residue is very black and contains much lead sulphid (PbS); while the neutral arsenate residue is gray, showing but slight decomposition. Mixtures of neutral arsenates and lime-sulphur in the proportion recommended by us contain but small amounts of soluble arsenic (two-tenths to four-tenths per cent As_2O_5), and in the dried residue are found only a trace of free sulphur and about 1 per cent of lead sulphid. Under the same conditions the acid arsenates give $1\frac{1}{2}$ to 2 per cent of soluble arsenic oxid and the resulting residue contains approximately 20 per cent of free sulphur, 20 to 30 per cent of calcium arsenate, and about 15 per cent of lead sulphid.

It is apparent from our investigations, then, that the acid arsenate of lead is much more readily decomposed by the alkaline lime-sulphur solutions than is the neutral or ortho arsenates, and even ordinary alkali waters liberate much larger quantities of soluble arsenics from them than from the neutral. It is for the above reasons that I have uniformly recommended the neutral or ortho arsenates for use with lime-sulphur solutions,



PORTLAND, OREGON, FRESH WATER HARBOR
From which the biggest grain ships go to all parts of the world
and which has been visited many times by our biggest battleships

and the recommendation has been amply justified by the results of three years of field work and by careful chemical investigations.

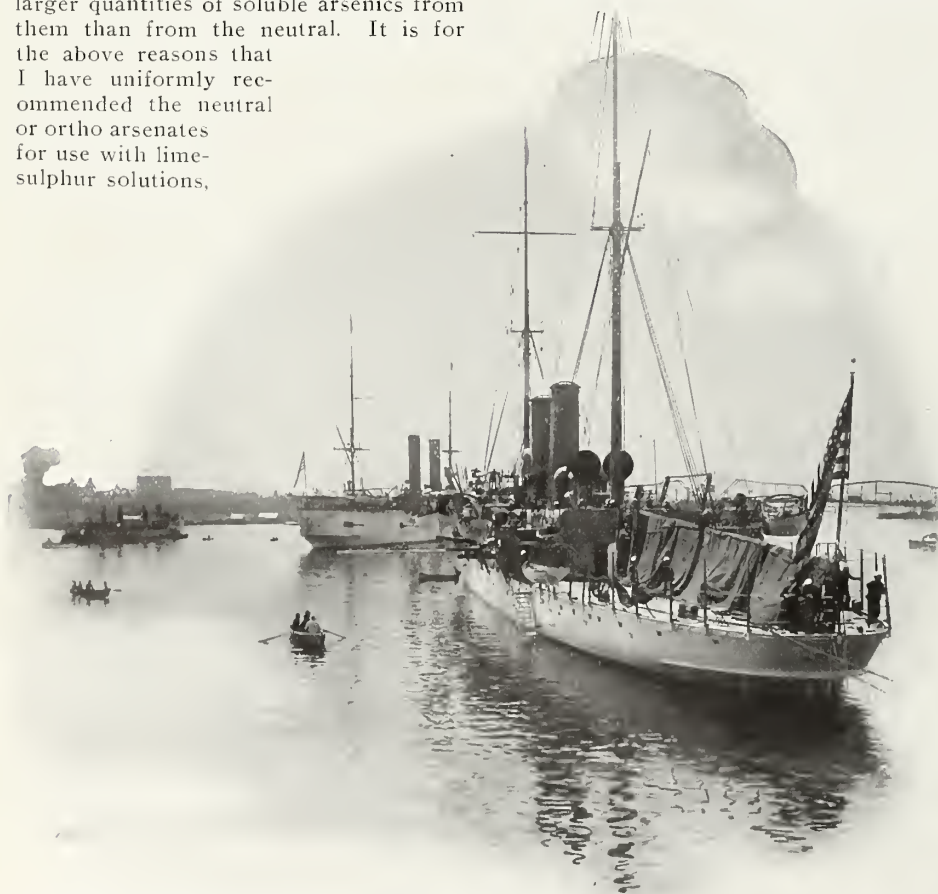
The Experiment—Experienced investigators should recognize the force of the old adage that "one swallow does not make a summer," but Professor Melander as the result of a single experiment,

which he himself admits was carried out under very adverse circumstances, attempts to show that the arsenates of lead-lime-sulphur mixture "has lost its value as an insecticide * * * and should not be used."

I have no desire to question the results obtained in this experiment. I am willing to assume that they were carefully compiled and accurately recorded, but I believe I am justified in the assertion that any results which may be obtained from a single experiment, such as Professor Melander describes, are absolutely worthless as a basis for any reliable conclusion whatsoever. Particularly is this true in the present instance owing to the fact that neither the extent of the experiment, the form of the arsenate used or the relative position of the experimental blocks with reference to possible sources of infestation are mentioned.

Personally, I have no definite experimental results to offer to demonstrate my contention that a mixture of neutral lead arsenate and lime-sulphur is efficient as a codling moth spray. All of our experimental work with the combination has been done with sole reference to apple scab. Nevertheless, as before stated, we have used the combined spray in our experimental orchard for the past three years and the assistants who have carefully checked the amount of scab infestation have invariably reported that there was certainly a less per cent of wormy apples on the trees sprayed with arsenate of lead-lime-sulphur than on those sprayed with the standard arsenate of lead-bordeaux combination. It is needless to say, however, that I should hesitate long before attempting to defend a conclusion with such evidence alone.

At Hood River last season we sprayed the fifteen-acre orchard of Doctor Stan-



PORTLAND, OREGON, HARBOR, SHOWING
VISITING CRUISERS AND BATTLESHIPS

ton Allen with arsenate of lead-lime-sulphur, leaving only a few trees as checks. Mr. R. E. Johnson, foreman of the orchard, who had charge of picking and packing the fruit, reported that upon the sprayed trees only an occasional wormy apple could be found, although upon the check trees "a very large percentage were wormy."

During the past two years, and especially last year, many growers in this state used the combination spray, among whom may be mentioned President Newell and Commissioners Lownsdale and Park of the Oregon State Board of Horticulture, and Mr. L. T. Reynolds, an ex-member of the board. Mr. Newell and especially Mr. Reynolds have reported most excellent results. Mr. Park had so little fruit last season that no conclusion could be formed. Mr. Lownsdale, who owns the largest apple orchard in Western Oregon, did not check carefully but thought the effect of the arsenate was slightly diminished by mixing with lime-sulphur. Mr. Harold Rumbaugh, a progressive orchardist of Benton County, last season conducted a definite experiment on twenty-one trees of Mammoth Black Twig, all of which were as nearly alike as possible. Nineteen of these trees were sprayed with two pounds of Bean's arsenate of lead to fifty gallons of lime-sulphur. The other two were sprayed with the same proportion of the lead in water, followed a day later with the lime-sulphur. The twenty-one trees produced two hundred ninety-six boxes of fruit. The nineteen trees which were sprayed with the combined spray produced but twenty-seven wormy apples; the two which were sprayed with the arsenate of lead in water produced thirteen wormy apples. Reports of similar tenor to the above have been received during the past year from many growers, not only in this state, but also from as far south as Arkansas, as far north as British Columbia and as far east as Montana, Michigan and New York.

A recent bulletin by Mr. Wallace, of the Department of Plant Pathology of Cornell University, contains the following regarding some experiments which were conducted jointly by the author and Mr. C. R. Crosby, of the Entomological Department, to test the value of the arsenate of lead-lime-sulphur spray as compared with the arsenate of lead-bordeaux combination. Speaking of the arsenate of lead Mr. Wallace states, "That its efficiency as an insecticide is fully as great when used with lime-sulphur as with bordeaux, is well demonstrated by the fact shown in the table that the wormy fruit at picking time was reduced from 25 per cent to 3.3 per cent on the bordeaux plats, and to 1.3 per cent on the lime-sulphur plats."

More recently Professor W. M. Scott, of the United States Department of Agriculture, in reporting the results of last season's work states that "commercial lime-sulphur was used with arsenate of lead at the rate of two pounds to fifty gallons of solution, with paris green at the rate of six ounces to fifty gallons, and without any poison," and his

conclusions are as follows: "Arsenate of lead is unquestionably the poison to use with the lime-sulphur mixtures. Instead of increasing the poisonous properties of the mixture it apparently has the opposite effect to some extent and does not lose any of its insecticidal value by reason of the combination."

In the above article I have made no attempt to collect all of the available evidence in favor of the lead arsenate-lime-sulphur combination, but no doubt enough has been presented to demonstrate that for the present at least the weight of theoretical consideration, of experimental evidence and of orchard experience is against Professor Melander's contention. I believe that the

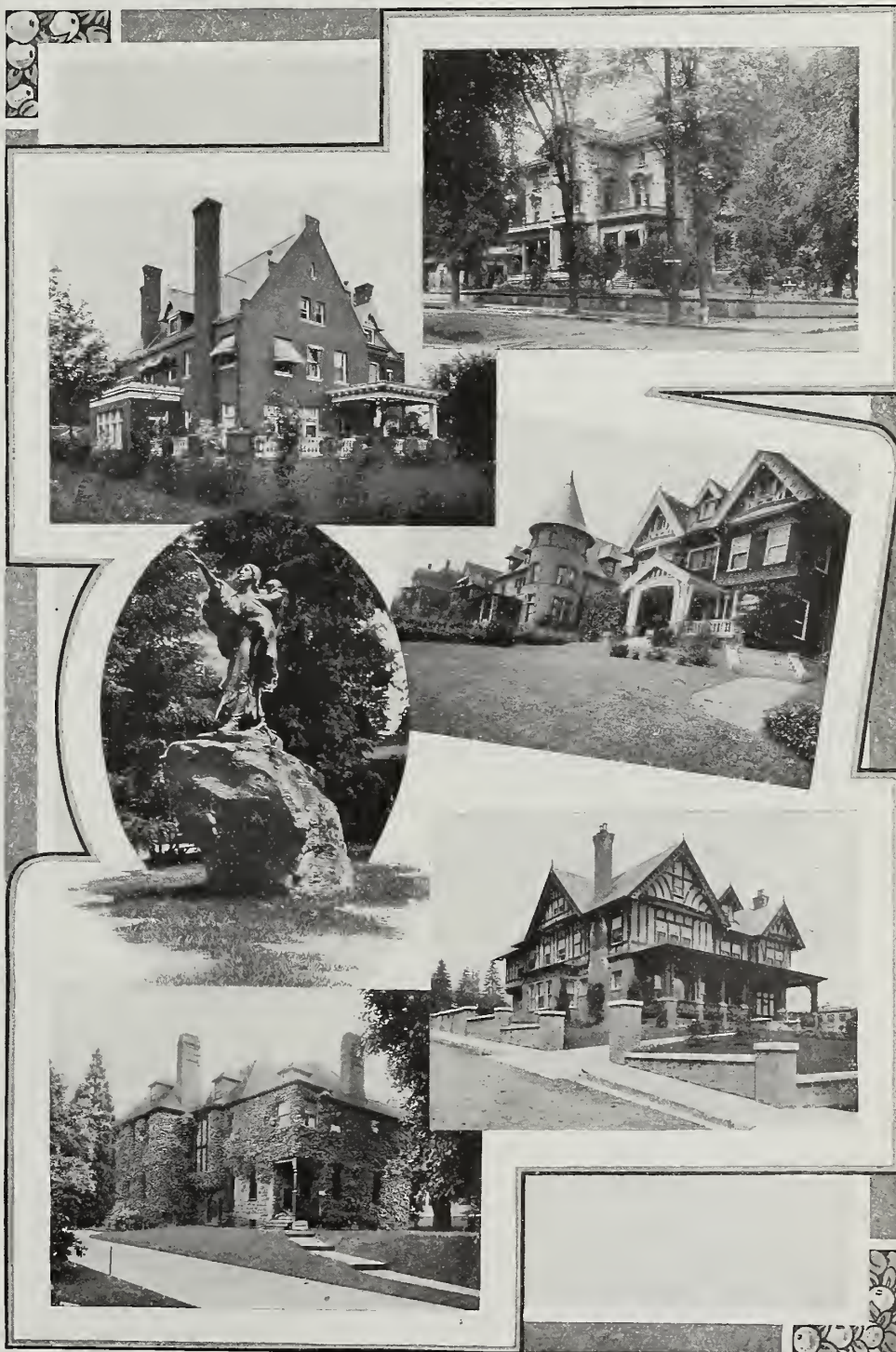
following conclusions are amply justified by the facts which have been presented.

1. Throughout a large portion of the Pacific Northwest, as well as throughout the country, there is need of a combined spray for codling moth and apple scab.

2. That neutral arsenate of lead may be safely used in lime-sulphur solutions at the rate of two pounds to fifty gallons.

3. That such a combined spray gives better results in controlling apple scab and at least as good results in controlling codling moth as does the bordeaux-arsenate of lead mixture.

4. Neither the fungicidal value of the lime-sulphur nor the insecticidal value of the arsenate of lead are diminished by combining the two.



PORTLAND, OREGON, HOMES

LOCALITIES THAT ARE FAMOUS FOR THEIR FRUIT

HOOD RIVER VALLEY, OREGON—Hood River's wonderful orchards are located in what is known as Hood River Valley, and strictly speaking, valley is the correct word, but the general appearance of this valley through which the turbulent Hood River plunges on its way to the Columbia, is that of a high table land which sweeps back from the Columbia River with a steadily rising altitude, until it gradually merges into old Mount Hood itself. The valley, of course, terminates where Hood River is lost in the waters of the mighty Columbia, but it is influenced climatically by Mount Adams, which rises to a height of 12,000 feet just across the Columbia River. With Adams just across the river, and practically at one end of this valley, and Mount Hood at the other end, the air is cooled by night and tempered through the day to just the proper degree for the production of perfect fruit, a perfection that is unobtainable except where there are cool nights and warm, sunshiny days to give the ripening fruit that delightful crispness and color that is always wanting in fruit grown in milder climates. It must not be inferred from this, that Hood River has not a mild climate. Records kept for a number of years show that the average number of days in each year when the temperature is below freezing point, is but seventy-four, while the average number in which it is above ninety degrees, is nine. Winter begins late, and is of brief duration, January and February being regarded as the most severe of the winter months, and

the records for fifteen years show this severity to be no worse than an average maximum temperature of forty-two degrees for January and thirty-nine degrees for February, the average mini-



CLIMBING CAROLINE
TESTOUT ROSE

mum temperature for the same months being twenty-nine degrees. These mild winters are due to the presence of the warm Japan current which sweeps north through the Pacific during the winter months, and whenever the effect of this current is temporarily offset by a protracted season of easterly wind, it is invariably followed by a warm "chinook" wind which restores all temperatures to a normal state. In the summer time there is an occasional hot day, but they are always followed by cool nights. The average maximum temperature in July and August for a period of fifteen years was seventy-nine degrees, and the minimum for the same period was fifty-four. This mild, crisp climate admits of fruit ripening to perfection without any danger of frost, damage from this source being practically unknown in Hood River Valley.

◆ ◆ ◆ HISTORY OF FRUIT

Industry—Fruit grew and thrived fairly well in almost any part of Oregon in which the emigrants planted the seeds and seedlings, but in Oregon it remained for an expert to recognize that Hood River had been exceptionally favored by nature with gifts of soil and climate. The climate and soil combine to impart to the Hood River apple a flavor and keeping quality that seems to assure its commercial value, although Mr. Smith could not by the wildest stretch of imagination believe that the business could ever expand to its present proportion. The old original Coe

orchard has been joined by other orchards which now reach back in almost unbroken line from the Columbia River for a distance of more than ten miles, and the output has increased until last season more than 250,000 boxes of strictly first-class apples were shipped out of Hood River. More than a quarter of a century elapsed between the planting of the first Hood River orchard and the beginning of the present business-like methods of growing and handling the fruit crop, and it is only within the past decade that the business has swelled into such big proportions that it has drawn into this little valley in far-off Oregon, fruit buyers from the greatest markets on earth. The fact that Hood River fruit was doomed to blush unseen for so long a period after the apples of New York and other cold weather states were filling an ever-widening demand in the world's markets was due to the inability of the early settlers to develop their lands to the best advantage. Most of these settlers were poor people who had come into the valley to hew a home and a competence out of the wilderness, and it was necessary that the land be used for something that would bring immediate returns instead of waiting for the fruit trees to reach the bearing age. Aside from this, transportation facilities had not reached a point where there was much encouragement for the shipper. But the Hood River apple then, as in the early days of Nathaniel Coe, had merits that were pronounced, and its fame began to spread in ever widening circles. An apple was still an apple in the western markets, but farther east, where the best markets lie, the high class trade slowly learned that from out of the far West was coming a product far superior to anything obtainable in the East. After the first small shipments were distributed, the rest was easy. It then



ROSE "LA DETROIT"



STANDARD OR TREE ROSE

PORTLAND SEED CO.

became merely a matter of putting the fruit on the market in the neat, attractive, uniform style that is the Hood River trade mark, and so religiously has that high standard been maintained, that for the last ten years the supply has not equalled the demand.



LYLE, WASHINGTON—Lyle is the gateway to a wonderfully fertile land, peacefully nestling on a point formed by the Big Klickitat and Columbia Rivers. It is the outlet for the large grain districts of the whole Klickitat Valley. A fruit district north and west of Lyle, comprising thousands of acres, is in the very infancy of its development and will in a very few years make the name of Lyle a synonym for the most delicious berries, luscious peaches and the largest, reddest apples known to the epicures who frequent the tables of wealth. Her forests of yellow pine and fir can only reach the markets of the world by going through the Lyle gateway. There now are thousands of bushels of grain and carloads of sheep, hogs, cattle, lumber and box shooks being shipped from Lyle each year, and the procession has only just begun.



MOSIER, OREGON—The Mosier Valley is an integral part of the Hood River Country, and like its more widely known neighbor which adjoins it on the west, is naturally and characteristically a fruit growing section. Here Nature furnishes the perfect combination of soil, climate and altitude to produce fruit of a distinctively fine quality, the handsomest, finest flavored and all around fanciest fruit known to the world, and it is this high standard of quality, appealing alike to the eye and to the palate, that has gained for it the entree to the tables of royalty and aristocracy in the old world, and of wealth and distinction throughout the new world. Between the Mosier Hills and the Hood River Valley there is but a ridge of high hills—much of which has already been or is being planted to orchard. The distance between the



SOUVENIR DE PRESIDENT CARNOT ROSE

towns of Mosier and Hood River is but six miles—both lying close to the Columbia River and on the main line of the Oregon Railroad & Navigation Com-

pany. While fruit growers—artists in their line—like many other kinds of artists, are prone to be jealous of the claims of their respective sections, there can be no quarrel between Mosier and Hood River, for they are one, in character of soil, in conditions of climate, in products, in spirit and in citizenship. Their interests are identical, both are making splendidly for the glory and renown of the state, and both are reaping the substantial results which come from achievement. The Mosier Valley extends from the Columbia River southward to the foothills of Mount Hood, and comprises some fifty thousand acres. Probably one-half of this is suitable for fruit.



DUFUR VALLEY—On a map of Oregon find Wasco County, The Dalles on the Columbia River. Trace the Great Southern Railroad to its terminus, Dufur. Dufur is the metropolis and is situated in the heart of the valley. No hard and fast boundaries to Dufur Valley exist, the scope of country tributary to Dufur being termed the Dufur Valley. Beginning at a point



FIRST CAR OF FRUIT, BARTLETT PEARS, SENT FROM THE STATE OF OREGON, FIRST YEAR THE NORTHERN PACIFIC RAILROAD STARTED RUNNING, 1883-4

eight miles northeast of Dufur and embracing six to eight miles on either side, Dufur Valley lies west and south to the Cascade forest reserve line, fifteen miles west of Dufur, making an area of about 300 square miles. Thus, it is seen that Dufur Valley lies in the northeastern portion of Wasco County, Oregon, on an average of fifteen miles from the Columbia River.

◆ ◆ ◆
WHITE SALMON AND UNDERWOOD, WASHINGTON, are the gateways to the White Salmon Valley and are the outlets to one or the finest fruit growing sections along the new Spokane, Portland & Seattle Railroad, recently completed along the north bank of the Columbia River. Few people are aware, however, of this fact, and that an almost exact duplicate of Hood River Valley is in existence opposite it. Yet such is the case. The White Salmon River, emptying into the Columbia nearly opposite the mouth of the Hood River, is fed by the glaciers and snows of Mount Adams as Hood River is from those of Mount Hood. The length and size of these streams is almost the same and the valleys they drain are alike in nearly every particular—soil, climate, altitude, rainfall and everything essential to the growing of perfect fruit. In fact, they are the two halves of a great valley extending from Mount Hood to Mount Adams and divided at the center by the Columbia River, and differ only in shape. In some respects the White Salmon Valley offers an even greater variety of advantages than does that of Hood River, if such a thing is possible.

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STRAWBERRIES—The Hood River strawberry has, in a somewhat more circumscribed field, become fully as famous as the Hood River apple and has secured its reputation through the same favorable climatic conditions and admirable methods of handling that bring to perfection the Hood River apple. In very few spots in the known world does this most delicious member of the berry family attain the same degree of perfection as out here in this wonderful valley that stretches away from the Columbia

River up toward the slopes of old Mount Hood. In the strawberry, as in the apple, Hood River has a specialty, and it is the Clark Seedling, a variety which for size, yielding qualities and flavor cannot be excelled. The marketable qualities of this berry were pretty well tested during the World's Columbian Exposition at Chicago, when a shipment, after being on the road four days, was entered in competition with berries picked within a few hours' run of Chicago. The Hood River berry carried off first prize, as it has done in every big fruit show that it has ever entered.

◆ ◆ ◆
THE DALLES, Oregon—"The Cherry City"—is beautifully situated on the great Columbia River (which is unsurpassed for the magnificence of its scenery), eighty-eight miles east of Portland, and is commonly known as the gateway to the Inland Empire. It is the county seat of Wasco County, one of the richest counties in natural resources in the State of Oregon, and is in every respect an up-to-date little city of six thousand wide-awake, hospitable citizens. The Dalles is called the Cherry City, a name it has attained from the merits of its unequalled quality of the famous Lambert, Royal Ann and Bing cherries.

Peaches are grown in early and late varieties extending from July 1 to October 15, and are mostly sold fresh. Quality of size and flavor is unexcelled; this can only be accounted for by the peculiar adaptability of the soil and the long, mild ripening season. Grapes are raised in all varieties and in quality second to none. The unirrigated upland produces a sweet, delicious grape, for which there is a constant demand throughout the whole season from



MULTNOMAH FALLS

Half way between Hood River and Portland, Oregon, on the famous scenic overland line of the Oregon Railroad and Navigation Company. This company has recently spent one million dollars on improving the roadbed between Hood River and Portland, and has recently put in a block system at a cost of one million dollars, which makes collisions impossible and insures safety to the traveling public



BIG STEEL RAILROAD BRIDGE ACROSS WILLAMETTE RIVER AT PORTLAND, OREGON

Carries the trains from the famous "North Bank" line. This railroad was built to bring the products of the great Inland Empire to Portland on a water grade

July 15 to October 15, the leading varieties being the Muscat, Flame Tokay, Black Hamburg and Chestlet Rose. Single bunches often weigh five to six pounds. Eighteen varieties are mentioned as fully maturing and giving excellent satisfaction. Apples are only grown yet in limited quantities, but the acreage is increasing rapidly. Watermelons and cantaloupes are grown extensively and shipped in car lots, and are quite profitably raised between the rows of trees in young orchards.

COMMERCIAL FERTILIZING OF OREGON ORCHARDS

BY D. J. DUNCAN

IN ITS valuable Bulletin No. 101 the Department of Horticulture of the Oregon Agricultural College gives some information concerning the use of commercial fertilizers in the orchard that should interest every fruit grower in the state.

The idea is too prevalent that when no crops are removed from between the rows of fruit trees very little plant food is taken from the orchard soil. Circular No. 68 of the Illinois Experiment Station gives a relative idea as to how many

two pounds phosphoric acid and fifty-seven pounds potash, while six pounds nitrogen, two pounds phosphoric acid and five pounds potash were required to make the necessary new wood growth. It can thus be readily seen that large amounts of valuable plant food are removed each year by the fruit alone. While it is true that some of the Oregon orchard lands are seemingly well supplied with the three necessary elements of plant food, a continuous cropping will in time exhaust the most fertile

to apply." Each grower should make individual tests, using the three essential elements in various combinations, and watch the results carefully as to growth of leaf and tree, and yield and quality of fruit, until a mixture is found that promises satisfactory results.

It is pointed out that only 5 per cent of the 473 fruit growers in Jackson County, Oregon, use commercial plant food, yet the increase in the yield of their crops realized by this 5 per cent well repaid them for the expense and



BEAUTIFUL AND PRODUCTIVE CHEHALEM VALLEY

Oregon's marvelous fruit growing district, in Yamhill County, twenty-four miles from Portland. Showing strawberries, raspberries, prunes and apples

pounds of available elements are consumed by some of the common field crops, as compared with apple and other fruit trees.

Seventy-five bushels of oats remove sixty-nine pounds of nitrogen, eleven pounds phosphoric acid and forty-nine pounds potash.

Forty bushels of grain and two tons of wheat straw remove sixty-five pounds nitrogen, ten pounds phosphoric acid and forty-five pounds potash.

Six hundred bushels of apples, with the necessary leaf and wood growth, draw upon the soil for 112 pounds nitrogen, eleven pounds phosphoric acid and 109 pounds potash. Since the leaves fall to the ground and much of their plant food is returned to the soil, the amount of plant food actually removed with the apples was forty-seven pounds nitrogen,

soil. These plant food elements, if added now, would be of very little expense to the fruit grower, and it would well repay him, for he would be assured of a fairly good crop each year. If, on the other hand, they are not added until the soil becomes practically exhausted, a year or two is lost in bringing the trees back to their normal yield.

"The common idea among the growers," says Bulletin 101, "is that a chemical analysis will tell them all they need to know about the soil. Fortunately, if samples are selected so as to represent the whole field, we are able to tell what plant foods are present in the soil, but we cannot tell in what forms they exist, and thus cannot tell how much of the plant food is immediately available. The grower will have to experiment with his own orchard to determine the best foods

trouble in purchasing and using the fertilizer. There are manufacturers in the state who will supply the fruit growers with various mixed fertilizers, or they will prepare special formulae on request. The "simples" may be purchased and mixed at home. When nitrogen is needed, nitrates, such as nitrate of soda, are found to be very valuable since they can be utilized by the trees at once. Organic nitrogen, i. e., nitrogen in the form of ground fish, dried blood, etc., whenever it can be obtained cheaply, gives satisfactory results, but it takes some time before all the available nitrogen is set free. This, however, is very desirable in some orchards.

The most available form of phosphoric acid is superphosphate, although the animal forms, bone, tankage and fish scraps are more continuous feeders.

Potash is obtainable in the form of kainit, muriate of potash and sulphate of potash. The latter two are the forms which will prove most economical in practical use. Potash is of great importance since it not only constitutes a large proportion of the ash of the wood and more than 50 per cent of the ash of the fruit, but because it forms the base of the well-known fruit acids, which insure early ripening, rich color, superior flavor and good keeping quality. While it is true that an analysis of some Oregon soils shows the presence of considerable potash, evidently only a very limited amount of this is in an available form. Some growers may consider the commercial forms of plant food more expensive than other forms, but they can be relied upon to give good and quick results. The more concentrated fertilizers are higher priced but they are really the cheapest to use, because they contain a larger percentage of plant food. If the orchardist will experiment on a small scale before purchasing and using at random, he will soon learn how to buy and use a mixture that will not only mean a better and stronger growth of wood, but a larger yield of superior fruit, which means increased profits.

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THE FRUIT EATING CLUB—A novel idea for increasing the consumption of fruit has been promoted in Springfield, Missouri, by H. J. Perkins Company, according to a late edition of *The Packer*, which says in Springfield, Missouri, they have formed a Fruit Eating Club, the members of which are presented with an elaborate button, showing a cluster of fruit and the letters R. M. F. E. C. The wearer agrees to a pledge to promote the health-giving product in every way possible. Each button is numbered and the holder of the lucky number fifty will receive a box of oranges or grapefruit by express,

charges prepaid. The proposed membership is 30,000. Already 15,000 buttons have been distributed. This is a splendid and capital idea, and one that ought to be put into operation by every wide-awake concern and dealer in fruit for the purpose of increasing its own business by increasing the consumption of fruit.

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CLYDE A. MORRISON, founder and editor of the *National Irrigation Journal*, Chicago, has lived in Chicago most of his life, where he is engaged in the practice of law. He has been a master in chancery of the Superior Court and at the present time is the chief assistant city attorney for Chicago and at the head of one of the largest law departments in the world. Prior to entering public office he was for five years a member of the firm of Pam, Calhoun & Glennon, one of the largest and most successful law firms in the United States, one of its members, Mr. Calhoun, having recently been appointed United States minister to China. Mr. Morrison has traveled extensively in the West and when a young man spent a whole year in the State of Montana with his father, who had entered into some large construction contracts and engaged his time in that state for over a year. Mr. Morrison's father is one of the Western pioneers and traveled on horseback over most of the Western country. He is probably as familiar with the West as any man living, and naturally the son imbibed some of his father's enthusiasm over the West and its unlimited possibilities. The birth of the *National Irrigation Journal* grew out of a contemplated trip which Mr. Morrison intended to make last year, covering every irrigation project in North America. Before starting he desired to be thoroughly posted, and on investigation found that in his opinion there was no publication in existence devoted exclusively to the subject of irrigation, in keeping with that subject, so he decided to start one. Its publication was announced last November. The publishers had an exhibit at the recent Land and Irrigation Exposition in Chicago, where the magazine made an instantaneous success, over 3,000 persons having subscribed to the same during the life of the exposition. This magazine is now on its sixth number and in that time it has forged its way to the front and is today recognized as the publication of the irrigation industry. It is high class in every respect. A better magazine could not be produced, and although a few stated that it was too expensive a publication for a special publication, nevertheless the original policy has been adhered to, and it was a wise move, because all those who have examined the magazine praise its mechanical excellence and its editorials and news matter are in keeping with the rest of the paper. Mr. Morrison has written a great many special articles on various subjects and is and has been for several years editor-in-chief of *The Hamiltonian*, the official publication of the Hamil-



CLYDE A. MORRISON

ton Club of Chicago, the leading Republican club of the United States. Mr. Morrison has made a special study and investigation of the subjects of irrigation, drainage, conservation and allied subjects and is equipped with a large knowledge of these subjects, which is proved by the success of the *National Irrigation Journal*.

◆ ◆ ◆
“**BACK TO THE FARM**” and “**Knock the High Prices**” is what the Great Northern Railway is teaching by its exhibits of the fruit and vegetables of the far West in the basement of the Sears Building, No. 201 Washington street, says the *Boston American*. The basement is fitted up with splendid specimens of apples and of different kinds of grain, which are attracting large crowds daily. The railway takes this practical method of telling the public what four states can produce—like North Dakota, Minnesota, Montana and Washington. Eastern farmers cannot fail to be impressed with the great resources which this exhibit makes evident. The apples represent a large variety and consist of Stayman Winesap, Spitzenberg, Gano and Yellow Newtown. Many of these apples weigh a pound each and are fine specimens of fruit culture. The grains shown are rye, flax, barley, wheat and two other varieties. The potatoes, which yield an immense crop, weigh separately over two pounds on an average, and the oats rise higher than a man's head. An especial reason for holding these exhibitions at this time is that during the present year the government will open four million acres of land in Montana to homeseekers. The Savoy district in that state was opened the first of this year, and there is already a large settlement there. The Great Rocky Boy Reservation, from which the Indians have departed, will be thrown open on March 10. Homesteads of 160 acres each are thrown open to settlers without lottery or drawing for first choice, but on assignment by the government agents to settlers as they arrive and locate. Montana is pre-eminently a grain country. The average yield of wheat in Montana is 26.7 bushels per acre, while the average for the United States is 13.8 bushels. The average product of oats throughout the country is 23.7 bushels, while in Montana it is 47 bushels. The average yield of flaxseed throughout the country is 8 bushels per acre, and in Montana an average of 14 bushels per acre is produced. The exhibition is not confined to the products of any one state. There are fruits and vegetables from Minnesota, Dakota, Oregon and Washington, as well as from Montana. The display of fruit from the Pacific Northwest is attractive to the degree of fascination. In the great fruit-producing section, which includes the eastern part of Washington and the northern part of Oregon and parts of Idaho and Montana, well developed orchards return to the producer from \$1,000 to \$2,000 an acre every year. In Washington and Oregon the temperature is modified and lowered by the lower sea level of the land and also by its proximity to the Pacific Ocean. The climate of Montana is a most healthful one. The air is dry and bracing. Nature created Montana upon a broad plan and there is enough and to spare for a population many times as great as that which now occupies its vast domain. The evidence that the Great Northern Railway has furnished of the natural and to some extent latent wealth in the lands reached by its system has excited the special interest of the people of New England. The Great Northern Railway invites bank men, market men, fruit and produce dealers, but especially the school children of Boston and vicinity, to the exhibit.



PARTIAL VIEW OF SIBSON ROSE NURSERIES, PORTLAND, OREGON

THE BEAUTIFYING OF THE SMALL HOME YARD

BY A. PHELPS WYMAN, ASSISTANT PROFESSOR OF LANDSCAPE GARDENING, AGRICULTURAL EXPERIMENT STATION, URBANA, ILLINOIS

HE IS a fortunate man who owns his own home. A recent purchaser has a twenty-five or fifty-foot lot with a house upon it. Shall he follow his neighbors who have lawns but no planting? Or shall he go farther and create a landscape picture. His neighbors' yards are neat, but a lawn alone looks incomplete and insufficient.

Our friend is ready to take the forward step. While a lawn is beautiful and the background of a work of art, it is as monotonous of itself as is the bare room of a house without furnishings. It wants decoration—trees, bushes, vines and flowers.

A yard is primarily for use. We in America have only just begun to think of living out of doors, and have been content too long with using the front yard only to display the house. The back yard has been exclusively for clothes lines and coal ashes. Both uses are proper, but the entire yard is better regarded as a place to live in, with each space set off to its use and ornament exactly like the rooms of a house. Because grass permits the free use of a lawn at the same time it covers it with a green carpet, is one of the reasons for its popularity.

The theory that beauty is only a manifestation of the good draws some force when we see the loving thought that home receives and the many ways it is made beautiful. Every man has a love for nature. It is natural that if the exterior of a home is to be adorned, nature shall be looked to for material.

But the love of art is as strong as that of nature. The rudest building has some feeling for symmetry and unity which have their basis in instinct. Unless following similar art principles, though growing with the same freedom that they do in nature, bushes and flowers are little more decorative than a vegetable garden. Their purpose is to recall nature in those gentler and artistic phases which at the same time permit utility.

The key to the situation is the lawn. One of its beauties is its smooth, unbroken surface. Any smooth surface suitably bounded is an object of admiration. Another beauty is its massiveness. A house is made important not only by its own size, but by the size of the lawn in front of it. A large public building looks best if set off by a large lawn. A cottage needs little. Variety of surface does not come from heavy blotches of shrubs scattered over it, but from delicate shadows and waving grass. An area with scattered planting has as many lawns as there are spaces between the shrubs. The beauty of a lawn is the unbroken character and anything that destroys that, destroys the lawn. The rule is to keep the center absolutely clear, except possibly of large trees.

The smaller yard is ordinarily constructed flat, and if it is in a hilly country it is terraced by a straight slope down to the street. In many cases there is no better way. A terrace is an arti-

ficial object and has no place except as it is a part of the house design; otherwise, it is better to round over the lawn like a hill and make it seem as if the hill were there before the house.

The only seed to buy is the very best and freest from weed seeds, and it is better to buy a first-class mixture from a reputable seedsman than to mix one's own. The basis of the mixture is Ken-



FAMOUS ROSEBUSH IN A GARDEN IN PORTLAND, OREGON
By actual count there were over five thousand roses on this bush

The problem in grading is to dispose of the surface rain water; therefore, a dead level is to be avoided. A gentle slope away from the house is best. The ground next to a house must not only be dry, but look dry, for our sense of beauty is dependent upon practical considerations.

A lawn will bear grass if it has an inch or two of black soil, but the hot sun will burn it out unless constantly watered. Many lawns are made with four inches of soil, and with a good sub-soil, they do fairly well. A first-class lawn cannot be made with less than six or eight inches of good soil. Over gravel, many graders prefer that below the black soil shall be three to six inches of clay to prevent too quick drainage.

tucky blue grass, while several kinds of grasses and clovers, notably redtop and white clover, are mixed with it to fill the gaps until the blue grass is established. There will be a contest with weeds, especially at the beginning, which must be dug out. Later, the best weed destroyer is a rich soil so that the desirable grasses will choke out the intruders.

Many places are planned so that the only sensible position for a walk is directly across the center of the lawn, for a walk should be direct, if anything. If, however, the walk can be placed at the side, so as not to make a line across the lawn, the beauty of the place is enhanced. In most cases it is sensible to have only a straight walk, but if there is an opportunity to have it curved some-

what, though making it still direct, it is more interesting. Suppose the natural place for the walk to leave the street is not directly in front of the door then one can wind it gently by starting the walk at right angles both to the public walk and door, connecting the resulting lines with as simple curves as possible. The width of the walk should be liberal for the main entrance, wide enough so that two people can walk abreast, say four or five feet wide; but secondary walks like those going to the back door are better narrower, say two feet wide. A cement walk is best, but gravel or broken stone can be used instead. A brick sidewalk is good if well made and is best if placed on a bed of concrete so that weeds can not grow through.

Since a place is nothing if not useful, a first essential is trees, not for appearance merely, but for shade and protection. Most houses would look better if their predominating horizontal lines were broken by a tree standing in front of them which at the same time gives shade just where it is needed. Another place for a tree is near a corner, not exactly symmetrical with another tree at the opposite corner, but so that the two frame the house. It is a temptation on a narrow lot to plant trees too thickly, but if they are twenty-five or thirty feet apart and are near the boundary lines they are in a safe position. If it is possible to plant several trees, they are better not in straight lines, but with a sense of happening, as if they were a remnant of a former woodland. To avoid crowding, one should so place his trees

inside the yard that they will not touch the outside trees, present or future, as the beauty of the yard depends in a large degree upon the beauty of the street, and should be secondary to it.

It is well to select the most substantial and hardiest kinds. There is no better tree than the American elm, which has all the desirable qualities of hardiness, size, cleanliness and a beautiful form. There is some prejudice against it because of losses by disease, but these are local and not likely to happen often.

In Central and Southern Illinois the tulip tree is excellent. It attains large size, is of good shape, grows rapidly and has beautiful flowers and foliage. It requires more care in planting than does the elm.

The American and European lindens are hardy, have round, dense heads of large heart-shaped leaves, and are fairly rapid growers.

The ash, while not so rapid a grower, is large, and has much to commend it in its attractive form. The green ash is the more planted, though the white ash is practically as good.

Sugar and Norway maples are excellent, though slower than the elm, basswood and tulip trees. Both have dense, round heads, and are easily transplanted.

If trees of smaller size are considered preferable, there are two or three valuable varieties. One is the weeping birch, whose beauty cannot be excelled; but one must be patient with it, for it is short lived and uncertain to survive transplanting. It should be transplanted only in the spring.

The mountain ash is as reliable as it is beautiful, with its compound leaves and bright red berries in the fall.



PORTLAND ROSES

There were three trees freely planted in the pioneer days of Illinois which were useful in their time from their rapid growth and endurance, but have passed their usefulness now. They are the box elder, silver maple and Carolina poplar. All are rapid growing, but short lived and dirty and have a cheap look. It is more satisfactory to wait a little longer for the trees mentioned above, which after all, are fairly rapid growers.

Happily, the vine is coming to its own, though it has not yet found its ultimate place. Its value is this. A house is at best a box set down in the midst of a landscape wholly unlike it. Something must bring the two into harmony. This is the special mission of the vine. By tying the building to the ground and softening the corners it makes the house more a part of its environment.

There are two classes of vines, according to the method of growth. There are the self-climbers, which grow directly upon a wall, without help from wire or trellis. The *Ampelopsis Engelmanni* or Englishman's woodbine, a variety of the common woodbine, is one of them, and the Boston ivy or *Ampelopsis Veitchii* is another. Both are plants of refinement, especially the Boston ivy. Somewhat coarser is the trumpet creeper with its compound leaves and orange, trumpet-shaped flowers.

Of the vines which are not self-climbers, there is first of all the common woodbine, a strong, woody vine with compound foliage, brilliant in the fall.

Another is the bitter sweet, with bright-shining, dark green leaves, turn-



CLIMBING ROSES, PORTLAND, OREGON

ing a beautiful yellow in the fall, accompanied by clusters of orange-colored berries.

More delicate in form and of more rapid growth, is the Japanese clematis, with a slender stem covered in late summer with showers of small, white, fragrant flowers.

Another heavy, dark-leaved vine, not so well known, is the actinidia.

The latter class require a wire or trellis to grow upon, and chicken wire makes the cheapest, but shortest lived trellis. Fence wire is better. If the trellis is to be ornamental of itself, something more substantial in appearance is required. A wooden trellis of simple pattern with vines upon it may be a beautiful object.

A pergola in its simplest form is nothing but two parallel rows of posts united by cross pieces and with vines growing upon them. The pergola is sometimes elaborated so as to become more important than the vine, but that was not its original purpose. Large-leaved vines like the grape, bitter sweet and dutchman's pipe are most effective on it.

By far the largest numbers of plants needed for a place are shrubs or bushes, which are woody plants growing from one to twenty feet high, with a number of stems springing from the ground. Their uses are manifold. Some are attractive for their spring flowers, some have bright berries and are decorative in the fall; others have handsome leaves, others are coarse and open, which adapt them to wilder landscape effects; still others grow close to the ground in

round heads, which makes them useful for facing a heavy border; a very few are evergreen, not the cone-bearing, having fine, spiny leaves, but with leaves like ordinary shrubs, although darker and thicker, and enduring through the winter.

There are shrubs adapted to all sorts of locations, some that you would expect to find only on hillsides, others only in marshy places, but the great bulk of them, in fact all of consequence, can be grown in any good garden soil and are adapted to the decoration of any yard with a good soil.

The position of a shrub is as important as its variety. There are two methods of arrangement. One is to plant them as individual specimens, just as is done with trees generally, where they will develop their individual beauty. The other method is to plant them so that they will just touch each other when developed, and when seen

together make a mass rather than several individuals. Such an arrangement is usually more effective if the plants are all of the same kind. Mass planting is superior to individual planting when it comes to making picturesque effects. It harmonizes better with the entire picture, without losing the characteristic beauty of the variety.

There are two kinds of ornament. One is to give a useful thing an ornamental form which is at the same time consistent with its use, as, for example, a well-designed chair or table. The other is to add another object to it which may do no work but help to make it attractive. Shrubby and vines belong to this class. Shrubby almost always shows to best advantage against a house or



TEA ROSES, PORTLAND, OREGON



CLIMBING CAROLINE TESTOUT, PORTLAND, OREGON

fence or near a drive or walk. Shrubs are placed against the house to ornament it just like a moulding, and to assist the vines in uniting the house with the surrounding ground by disguising in part the line of union. The more informal and plain the cottage is, the more shrubbery can be used effectively. On the other hand, there are houses which are so well designed that they endure no shrubbery around their finer parts—only vines, because the architectural connection between the house and ground is so good that nothing more is required.

The position where the most and highest shrubbery is usually demanded is at the corners. The corner is apt to stand out obtrusively and requires something to soften it and give it interest, just as with a stone building, a corner is sometimes sculptured.

The position of next importance is the steps, for which kinds of greatest refinement would be selected, since the plants will be close under the eye. This matter of refinement in plants is important. Where plants will be seen at a distance, it is as well if they are coarser, because distance gives them a finer character; while if they were really delicate, their delicacy would be lost in distance.

It requires some study to make a harmonious shrubbery mass of different kinds put side by side. There ought to be a resemblance in important particulars. Though the heights may be different, the textures should be similar. If smaller plants are needed to round out a group of spiraea Van Houtti, the little spiraea Anthony Waterer or spi-

raea arguta or spiraea billardi are excellent to use.

The choicest shrub is the spiraea Van Houtti, growing about five feet high, with delicate leaves and clusters of white flowers. Other varieties of the species are spiraea Anthony Waterer, growing about two feet high, broad and compact with magenta colored flowers; the spiraea arguta, four feet high, with very fine, narrow leaves and fine white flowers; the spiraea billardi, a little coarser, with thick clusters of pink flowers.

Everyone knows the common lilac, with its purple or white flowers, growing to be a large shrub or even a small tree, with large glossy leaves. Another lilac as good is the Persian, with smaller leaves and finer but not more beautiful

flowers, while the Japanese lilac becomes in time a tree with great clusters of late blooming yellow-white flowers.

The weigela is another good plant, about five or six feet high, with heavy branches and leaves, with clusters of bell-shaped flowers, ranging from pink to white.

There are various forms of honeysuckles, of dense habit, five to seven feet high, with small pink to white flowers. The Tartarian and Morrow's are the most common varieties.

The most useful small plant is the Japanese barberry, with small, delicate branches and leaves, and in fall with brilliant red berries lasting well into the winter. There is no general purpose plant more useful than this, and if one can have only two plants, they

should be spiraea Van Houttei and the Japanese barberry. This latter is ordinarily two or three feet high and about as wide. The more frequent form is the common barberry, growing five to seven feet high, with bright red berries. There is a good purple leaved variety, but its use is dangerous to pictorial effect.

The viburnum is a large class of plants which we know best from its most common species, the highbush cranberry, a large shrub with heavy, indented leaves and with bright berries in late fall. Its variety, the snowball, has round clusters of white flowers, resembling its snowy namesake. The other varieties of viburnum all have dark green leaves and are useful for almost any purpose where bright flowers are not called for.

All dogwoods are bushy shrubs good for coarser planting. The Siberian dogwood has bright red bark in winter. If one is fortunate to live where the flowering dogwood grows, for it is tender in Northern Illinois except on the sand dunes, they may have it as a small tree. It is a joy in the spring time with its large white flowers appearing before the leaves.

The red bud is another small tree which is half a shrub, with early purple flowers close to the branches, and with heart-shaped leaves. It is useful anywhere that a plant of its size is called for.

The forsythia or golden bell has two forms of use in Illinois, one the forsythia fortunei, which assumes the ordinary bush shape, and the other the forsythia suspensa, which looks very like it but has smaller branches that arch over to the ground, making it appropriate upon a slope or hanging over walls. Both have yellow, bell-shaped flowers, appearing early.

The mock orange or syringa is a large sized bush of dense habit, bearing large white flowers, deliciously scented. Other shrubs are the deutzia and Japan quince.

All the bushes mentioned above bloom in spring or early summer. The hydrangea blooms in late summer with huge masses of white flowers, as does the Rose of Sharon or althea, a tall, upright shrub which bears large single flowers like those of the hollyhock.

With all that has been said so far, it has been taken for granted that the house has already been built and that the only development is that of yard-planting. If one can begin earlier and plan the house in relation to the yard, the results will be still better. The tendency in the country is to build a house like one seen in town, regardless of fitness. Houses in the country look best if they are made low. If there must be room upstairs eaves can be brought low, nevertheless. Since the beauty of a lawn comes from its unbroken smoothness, the entrance to the house is best placed at one side of the front, that the walk may go at one side of the yard, leaving an unblemished lawn in front of the main windows. The living room and dining room are better if they are placed to the south or east, as first



Caroline Testout, the official rose of Portland.

PORTLAND

"THE ROSE CITY"

One of the most striking tributes that could be paid to the climate and soil of Oregon is that the chief city of the state has won a clear title to "The Rose City."

There has been no mere assumption of this title. One finds roses blooming everywhere in Portland, and the luxuriant growth of the bushes, the number and beauty of the blooms, as well as the long time of blooming, attract unqualified praise and admiration on the part of rose experts as well as the general public. The successful growing of roses in the open is an index of the success that the farmer meets with in Oregon along all agricultural and horticultural lines. Portland celebrates the rose season in June of each year with a festival of roses which is proving more and more successful with each succeeding season. The festival held in June, 1909, was pronounced by experts to be unsurpassed in beauty and originality by any of the great carnivals held in Europe or America.

WINTER SPRAYING FOR THE IRRIGATED REGIONS

BY C. P. GILLETTE, COLORADO AGRICULTURAL COLLEGE, FORT COLLINS

PRACTICALLY all orchard spraying in the irrigated portions of our country is for the control of insect pests, fungous diseases being little known. By winter spraying I refer to all sprays applied to trees during their dormant period, or before the buds open in the spring.

Winter spraying, at least in Colorado, would be for the purpose of destroying scale insects, orchard mites, plant lice, and the peach twig borer. All of these are serious orchard pests and much can be done to control them before the buds open in the spring.

Lime-sulphur spray is especially useful for the destruction of orchard mites in general, and is the best spray to apply to destroy scale lice. It should be made by the following formula:

Lime, 20 pounds; sulphur, 15 pounds; water, 45 gallons.

To prepare, slake the lime with water, and as soon as the boiling has ceased, or before, stir in the sulphur and add enough water to keep the mixture of the consistency of thin cream, and keep up the boiling for fully forty minutes, or until the mass assumes a brick-red color, which indicates that the lime has cut the sulphur. Now, dilute to forty-five gallons and apply while warm, if possible. Be sure to cover every limb and twig with the spray. A heavy trimming of the trees before spraying will facilitate the work. This is also one of the best sprays

for peach twig borer. To get best results apply as late as possible and be sure to have the spray on before the buds open.

The oil emulsions, such as scalecide, kiloscale, aphiscide, and kerosene emul-

that you try them on a small scale before purchasing a supply.

There are several tobacco extracts on the market that are useful for the destruction of plant lice and their eggs that are upon the trees during the winter. Judging from our experiments, black leaf extract, in the proportion of



HOTEL PORTLAND, PORTLAND, OREGON

The best and most famous hotel in the Northwest. H. L. Bowers, manager. Recommended by "Better Fruit" to visitors to Portland Rose Festival and all fruit growers

sion, are very useful for the destruction of the scale insects and the eggs of the orchard mites, but they are not very efficient in the destruction of the eggs of plant lice, and if the water to be used for dilution is hard water, it will be almost impossible to keep the oils from separating and coming to the surface. When the oil separates out, the emulsion is ruined. Unless you have tried these oils and find that you can use them successfully, I would recommend

one gallon in thirty gallons of water, applied just before the buds open will kill all the eggs of the green apple aphid and the green peach aphid, and all lice of any kind that may have hatched up to the time that the application is made, provided the spraying is made thorough enough to wet all the eggs and lice.

There are three other tobacco extracts sold under the trade names of nice-fume, sulphate of nicotine, and nikoteen, which when used not weaker than one part in 700 parts of water have always completely prevented the hatching of plant lice eggs, in my experiments, and I have made a large number of tests, using the eggs of not less than six species of the plant lice (aphididae).

These tobacco preparations seem not to have much effect upon the eggs of the brown mite, and their effect upon scale insects is not well known.

In 1906 Mr. E. P. Taylor tested a spray of arsenate of lead in comparison with lime-sulphur for the destruction of the peach twig borer in Mesa County, Colorado, and found it gave decidedly better results than lime-sulphur. So either lime-sulphur or arsenate of lead may be used for this insect, and should be applied when the first pink color of the buds begins to show in the spring.

Growing Cabbage Seed on the Chas. H. Lilly Co. farms
Puget Sound Washington.



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Economy requires that it be fed in the form of a "lick," and not in fine grains on the ground or in the feed.

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C. E. Whitney & Co., San Francisco, California

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HOOD RIVER, OREGON

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THE NORTHWEST FRUIT GROWERS' ASSOCIATION

A MONTHLY ILLUSTRATED MAGAZINE
PUBLISHED IN THE INTEREST OF MODERN
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THIS EDITION of "Better Fruit," which we have called the Rose Festival Edition, we believe is the handsomest number we have ever published. It has been a greater undertaking than we anticipated, and had it not been for the friends who love and believe in "Better Fruit" we could not have brought it to its high state of perfection. Our friends have been loyal and liberal in their support and assistance in every way, and we feel doubly obligated to the following people, who have furnished us the splendid illustrations and photographs which appear throughout the pages of this number. Among the principal contributors whom we wish to thank for this issue we take great pleasure in mentioning the following for the courtesy they have extended to the fruit growers of the Northwest through this medium, "Better Fruit": Oregon Railroad and Navigation Company; Routledge Seed Company, Portland, Oregon; Portland Seed Company, Portland, Oregon; Portland Commercial Club; the management of the Portland Rose Festival; Chamber of Commerce, Portland, Oregon; Colonel A. W. Miller, Information Bureau, Portland, Oregon; Fancher Creek Nursery, Fresno, California; Professor Balmer, Cle Elum, Washington.

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JUST WHY.—We anticipate that a great many of our subscribers upon first thought will wonder why we have devoted so much space to the Portland Rose Festival and roses and flowers in this issue, as "Better Fruit" is so exclusively devoted to fruit growing in its various phases of planting, pruning, cultivating, spraying and marketing. But "Better Fruit" is strictly practical and devoted entirely to the subject indicated

by its title, and our policy is original in conception and execution. Nearly every publication of our kind contains departments on poultry, dairying, general farming, fashions, etc. Our belief is, a jack of all trades is usually master of none. This is an age of specialism and as a rule those who devote their time exclusively to one vocation meet with the greatest measure of success. We devote this number to flowers because they should interest the fruit grower. The fruit grower's home is in his orchard and his house is built among the fruit trees. In order that fruit growing may achieve the highest success it is not only necessary that he work intelligently and be equipped with all the necessary implements, but it is also necessary that the surroundings be attractive and pleasing and the home comfortable. The more beautiful the home, the happier and more contented the fruit grower will be and consequently the better he will do his work. There is nothing that adds more to the attractiveness of the farm home than roses and flowers. The yard around the residence of the home in the country can be made just as attractive and beautiful as the yard around any city residence, and it should be. Flowers and a little work will accomplish wonders, and beautiful flower gardens around the home will not only make home life a pleasure, but will make property more valuable. But perhaps more important than making the country home beautiful, flowers will exert an influence in keeping the children on the farm, close to nature, where the sunshine is free and plenty and all nature beautiful.

In Europe for centuries past the ideal life, the aristocratic life, has been country life. In America, we regret to say, the greatest ambition seems to have been the achievement of wealth. There are many who believe that this killing pace for the accumulation of dollars and cents is passing and that Americans are just now beginning to realize that there are other things in life which mean equally as much or more, and that good education, the respect of your neighbors, good health and a fair income are indeed sufficient to insure any one great happiness. The home to us seems to be the keynote of happiness, the basis upon which happiness is founded and upon which all pleasures are directly or indirectly dependent. If we are right in this, it is only just and proper that the fruit grower should beautify his home. Roses and flowers will help to do it. We have therefore issued this number with an urgent request for every fruit grower to attend the Portland Rose Festival, for the grandest exhibition of roses will be made at Portland during this festival that has ever been made anywhere in the world at any one time. No fruit grower can attend this festival without being impressed with the beauty of the roses. Absolutely the whole city of Portland will be profusely and wonderfully decorated with roses. Various kinds of parades, floats, automobiles, vehicles, horses and carriages will be absolutely covered with the choicest roses. Floats as large as a haystack

will be a solid mass of roses. Portland is the Rose City of the world, and it is justly named. In Portland and vicinity the soil and climatic conditions are peculiarly adapted to roses and almost every resident has taken advantage of this condition and roses are set in profusion in every yard throughout the entire residential part of the city. Nearly all the concrete sidewalks are laid out so as to leave a strip of grass between the outer edge of the sidewalk and the curbstone, and also between the inner edge of the sidewalk and the garden wall. For block after block in these spaces are set continuous rows of roses.

No fruit grower can see this wonderful sight without being stimulated with a desire that will be almost irresistible to go home and plant roses and make his home also beautiful, and we sincerely hope that every subscriber who can possibly spare the time and money will attend the Portland Rose Festival, and we believe that every one who does will be imbued with a desire to plant flowers in his own yard and make it also beautiful. Anticipating such a desire on the part of our subscribers, we have published in this issue several splendid articles written by experts on what kind of flowers to plant, what kind of roses to grow and how to grow them.

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SPRAYING.—In this edition will be found an article on spraying with lime and sulphur for fungus, which the growers will find very instructive, very interesting and timely.

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THE LAFEAN BILL is dead. While we have not received all the particulars regarding its demise, it seems that Congress was wiser than some people thought, and recognized that it was not right for the East, where they do not pack apples in boxes, to dictate by a national law the size of the box the Northwest should use. Square pegs can not be made to fit round holes, and Congress evidently knows it, and Congress also knows, apparently, that the present uniform style of packing the Northwestern apples, which is becoming so popular, could not be carried out in boxes of any old shape or size that other people, who had never packed a box of apples in their lives, might want to force on us.

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THE MAY NUMBER OF "BETTER Fruit."—We believe this to be the handsomest edition of "Better Fruit" ever produced, and we believe also that indirectly it will be of great value to the fruit grower along the lines indicated. Our instructions to our printer and engraver were to produce the best possible and to spare no expense. We had hoped to secure more liberal support financially than we have obtained, and we are very sorry that we did not get it, so as to be able to carry out our original conception of this issue, which would have made it a greater number than it is, but we have gone the limit that our finances will permit and produced the best and handsomest edition possible with the financial resources at

Editorial — Continued on Page 65

The Cream of Medford

ELEVEN - EIGHTY ORCHARD TRACTS

ARE SUPREME

For depth and richness of soil, uniformity of same over the whole tract, slope and lay of the land, copious sub-irrigation and drainage, accessibility from Medford, closeness to commercial orchards of proven worth, and from **Every Standpoint** Eleven-Eighty Orchard Tracts are without a rival. Now selling, planted or cleared ready to plant, in 10 and 20-acre tracts, on easy payments.

THERE HAS NEVER BEEN A CHANCE LIKE THIS AT MEDFORD

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Gentlemen: Please send me your booklet,
"The Ideal Life," and full information about
Eleven-Eighty Orchard Tracts.

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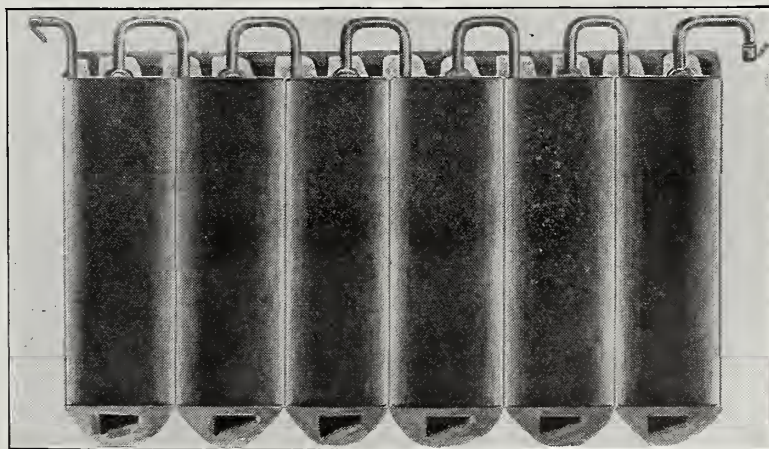
Produced Direct from Primary Cells

No costly and cumbersome machinery required
One of the most remarkable inventions of the age

SOME OF THE USES:

Lighting of Homes, Churches, Stores,
Hotels, Public Buildings, Barns, Packing
Houses, Railway Premises and Cars.

The farmer can light his house and barns and
operate cream separator, churn, washing machine,
etc.



DETAILED INFORMATION AS TO PROFITS TO STOCKHOLDERS AND PROSPECTS OF THE COMPANY
FURNISHED ON APPLICATION

PACIFIC COAST BATTERY CO.

ROOMS 615-616 SWETLAND BUILDING

PORTLAND, OREGON

GROWING STRAWBERRIES AND CARING FOR THEM

CONTINUED FROM APRIL EDITION

BY W. H. BURKE OF R. M. KELLOGG COMPANY, THREE RIVERS, MICHIGAN

After the field has been cleaned of refuse matter, take a breaking plow and throw a furrow from each side of the row into the center, leaving the plants about six inches wide in the rows. After this has been done, go along the rows with a hose and thin the plants out until the hills stand from sixteen to twenty inches apart, being careful to leave the plants which appear to be the strongest. The ridge which the furrow has made

between the rows may be leveled back to place with five-tooth cultivators. Be careful that the soil is drawn all around the plants and that the crowns are covered lightly with the soil. This will be better done with the hoe. Please note that, whereas you are advised when setting the plants to bring the crown of the plant to the surface level, for the second crop the crown should be covered, as this will aid the plants to form an entirely new root system, which is made just above the old root and below the crown. Then proceed with cultivation and hoeing as in the case of the newly-set field. For the second crop I would recommend double-hedge rows for all varieties.

One of the most important considerations for the commercial grower relates to the marketing of the crop at a figure that will represent a fair profit upon his investment of money and labor. As we are writing this matter there comes two letters from Oregon, one from a grower at Albany who asks the following question: "How would you commence in

the strawberry business in this part of the country to get the best prices for strawberries? I am comparatively a stranger here, but I have been told that strawberries are sold here at prices running as low as four boxes for twenty-five cents. I always have been accustomed to getting good prices for my fruit back East. How would you go about it to build up a good trade out here and get a fair price for my berries?"

The other letter is from the grower whose berries topped the Portland market in 1908 and 1909, as referred to above, and in the course of his letter, written November 20, 1909, he says: "I had it all my own way when it came to fancy berries. I simply put my price at \$3.00 per crate for the season and never heard a murmur of complaint. The only

Commercial Orchard and Fine Farm

Ninety-five acres; adjoins corporation line beautiful town in famous Shenandoah Valley, Virginia. Best social conditions right at hand; schools, churches, banks, stores walking distance; 2,000 feet elevation. Large, handsomely finished, modern residence; bath, telephone, etc. Large barns and silo. Never-failing streams and springs clear water. Highest grade apples grown; high prices obtained. Adapted to fruit, dairying and general farming, and affords lovely home. Owner met with accident; must sell; \$7,500; easy terms.

For particulars write MONTROSE FRUIT CO., INC., Route 1, Monroe, Virginia.

"IN OKANOGAN COUNTY"

Choice Fruit Lands in the best fruit section of the West. *Okanogan County* is the ideal fruit belt; all conditions perfect. *Winter Apples* our specialty. You cannot do better if you want a home, and a bank account, than to buy here.

We have some unusually choice bargains on our list just now.

For full particulars write

GRAHAM-HILL REALTY CO., Mallott, Okanogan County, Washington

A Splendid 100 Acre Apple Orchard for Sale

Part in full bearing. Two residences, packing house and all necessary buildings and equipment. Excellent location near Salt Lake City, with best railroad facilities. A bargain. Easy terms. Address 410 Templeton Building, Salt Lake City, Utah.

BEAUMONT

PORTLAND'S ROSE FESTIVAL visitors will find profit for themselves in a Beaumont investment. Beaumont is Portland's residential observatory. Its improvements are of the highest character. Every Beaumont home will command an unsurpassable view of Portland's many beauty spots. Beaumont commands mountain, city and river. See it—invest in it.

COLUMBIA TRUST COMPANY

BOARD OF TRADE BUILDING

PORTLAND, OREGON

For Better Fruit Buy Better Land

JUST OVER THE MOUNTAINS FROM OREGON IN A BEAUTIFUL CALIFORNIA VALLEY
YOU CAN PICK FRUIT EVERY MONTH IN THE YEAR

You can cut alfalfa six times and net \$60 per acre. Two crops of potatoes and other vegetables give double the results obtained elsewhere. Our irrigated lands are selling fast at \$150 per acre, with water right, on easy terms. No damaging frosts; cheap river and rail transportation; adjoining the Stanford University vineyard. The chance of a lifetime.

WRITE US FOR FREE BOOKLET

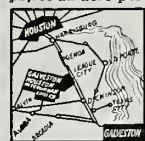
Los Molinos Land Company Cone Street, Los Molinos, Tehama County, California

kick I had was that I did not send on enough of my thoroughbred berries."

The latter suggests in a general way a very important principle, and that is

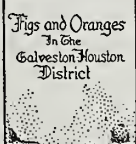
Orange and Fig Orchards Pay Immense Profits

Here's a chance for the small investor, as well as the capitalist, to invest his capital or savings where it will earn big profits. Pay as little as \$5.00 down and an equal amount monthly and you become part owner in a Fig and Orange Growing Company owning 7,000 acres of the best land in the world for these fruits - land that will earn, when in full bearing orchards, from \$500 to \$1,000 an acre per year. Company will plant trees, cultivate the land and gather and market the fruit. You participate in these immense profits without leaving your present occupation or location. This is the opportunity presented to you in the purchase of the Acre-Bonds we are offering investors. No such opportunity ever offered before. If you come in now your investment should double, land alone, besides you can share in profits almost beyond belief. The Acre-Bond absolutely guarantees you against loss. Land is located midway between Galveston and Houston in the heart of the fruit belt of the balmy South, where rainfall is abundant and irrigation unnecessary—that's why you can buy at one-tenth what such land is worth in irrigated districts. But you will have to pay more next year - twice as much more the year following. Now is the time to buy. Company composed of the leading business men and bankers of the South - conservative men who never back a failure or a fake. This is a business proposition that will appeal to every person seeking profitable investments. Handsome illustrated booklet explains entire plan, with facts and figures. We will send it free if you will write today.



THE AMERICAN LOAN & MORTGAGE CO.
256 American Nat'l Bank Bldg.
HOUSTON, TEXAS

You Will
Want to
Read This
Book
It's FREE



that the grower who puts upon the market the highest quality fruit in the most attractive form, with all the fruit packed nicely in a box holding a full quart of high-grade berries, can not only command his own price but the people will pay it cheerfully, and, as the writer intimates, will call for more.

I am just in receipt of a report from the Pacific Coast showing that one particular variety of apples sold for \$3.00 a box on the market this season, when many others sold for from \$1.75 to \$2.50 per box, and the latter were old favorites, too. Nothing could more clearly demonstrate the fact that the general public is perfectly willing to pay good prices for a superior article. You remember Lincoln's aphorism that "you can fool some of the people all of the time, and all of the people some of the time, but you can't fool all of the people all of the time."

GOVERNMENT Irrigated Land

Cheap fruit, dairy and alfalfa lands. Best and cheapest water right in the West. Excellent business opportunities. Cheap power for manufacturing purposes. Address

**GILBERT E. BRINTON
REALTY CO.**
Heyburn, Idaho

Five years ago the Ben Davis apple was found in hotels, on the dining cars and prominently displayed in fruit stores

Irrigated Land

In the Best Fruit and Alfalfa Valley in America

is now open for settlement at Fort Stockton, Tex. Richest soil in Pecos Valley; limestone formation, (no gyp) natural flow of pure spring water exceeding 55,000,000 gallons per day for irrigation and domestic use; irrigation system completed and in full operation now; no waiting for water; assured profits of \$100 to \$1,000 per acre, no drought; no crop failures; finest all year 'round climate in the United States; altitude 3,050 feet above sea level.

Natural Location for Largest City of Southwest Texas

Fort Stockton is county seat of Pecos County and important division point on the Kansas City, Mexico and Orient Railway, now under construction. Has 35,000 acres of the finest irrigated land the sun shines on; adjacent to town. Population now 1,000, will soon be a city of from 10,000 to 15,000. Greater opportunities for homeseekers and investors than were offered in the older irrigated districts, where orchards are valued at from \$2,000 to \$5,000 per acre. Those who have investigated irrigated districts of New Mexico, Colorado, Utah, California, Oregon, Washington, Idaho, etc., say this is the finest body of irrigated land they ever saw.

This is one irrigation project where the water supply has not varied in 50 years; where every drop of water used for irrigation is good to drink and where there is water in abundance for every acre of land that is irrigable. Choice locations open to those who investigate now. You cannot afford to buy land anywhere without seeing Fort Stockton. Low rate excursions the first and third Tuesdays of each month. Write for full particulars today.

REFERENCES: First National Bank, Kansas City, Mo., 1st State Bank, Fort Stockton, Tex. Prospectus, map and illustrated folder describing these lands mailed free to all who address

Fort Stockton Irrigated Land Company
303 Fidelity Trust Bldg., Kansas City, Mo.

DISTINCTIVE FEATURES OF THE BITTER ROOT VALLEY

The Bitter Root Valley is larger than Hood River, Yakima and Wenatchee combined, and within five years will have the greatest acreage in apple orchards of any valley in the world.

The Bitter Root Valley today is better known in the great cities of the East and is attracting more Eastern capital than any other fruit valley in the Pacific Northwest.

It is many hours nearer Eastern markets than other valleys and its transportation facilities are good and growing better, owing to the keen competition between the Northern Pacific and C. M. & St. P. roads. It is a long-tried fruit region where there have been no crop failures.

All standard apples are fancy apples and fit for export trade. The national reputation of the "McIntosh Red" is firmly established.

The Bitter Root Valley is, without question, the most beautiful and healthful fruit region in the United States. General living conditions are excellent and the valley is attracting a most desirable class of settlers and investors from the East and Middle West.

Land values have doubled in the past eighteen months and yet the great development of the valley has only fairly begun.

WHAT WE OFFER

Land for the resident, non-resident, investor.

Tracts of irrigated land, improved or unimproved, from ten to one thousand acres, in any part of the Bitter Root Valley. All water rights on land offered for sale by us will stand the strictest investigation.

To all purchasers of land from us the privilege of free consultation and advice from Professor R. W. Fisher, resident manager of the "Thousand Acres Ranch" and a horticulturist of national reputation.

First-class loans on improved farm property at a good rate of interest.

FOR ADDITIONAL INFORMATION AND ILLUSTRATED MATTER ADDRESS

THACHER-TORRENCE GENERAL LAND AND INVESTMENT CO.

References: Any bank or business man in Hamilton.

Home Office: HAMILTON, MONTANA

and stalls upon the streets of all cities. Professor L. H. Bailey, dean of Cornell Agricultural College, who, it will be remembered, is a member of the commission appointed by President Roosevelt to study agricultural conditions throughout the United States, reported, upon his return from his swing around the circle that he had found the Ben Davis apple had been relegated to the place where it belongs; that excellent



Oat Field in Trout Lake Valley

OWN A FARM IN THE

TROUT LAKE VALLEY

In Washington, nestling under far-famed Mount Adams, in the apple belt between Mounts Hood and Adams. Trout Lake Valley is only 75 miles from Portland and only 25 miles from the Columbia River. Elevation 1,900 feet; ideal for fruit. Free water for irrigation; though irrigation is not needed, limitless water is present. Lands from \$25 to \$125 per acre. Some of the \$100 and \$125 land includes completed irrigation and other improvements. No water fees. Soil and scenery—the best of both. Mild winters and summers. Climate is famed for its salubrity. Is tourist resort. For booklet address

Trout Lake Valley Commercial Club
Trout Lake, Washington

MOSIER

Also called East Hood River
FRUIT LANDS

In large or small tracts. Some very good land at low prices at present. Good growing community. Six miles east of Hood River. Parties wishing to buy will do well to write or see

GEORGE CHAMBERLAIN
MOSIER, OREGON

varieties of apples were offered him everywhere he went. This would indicate that the man who finally was "fooled" in this affair was the man who deliberately set out apple trees which he knew would produce a very inferior quality of fruit, even though it did present a very fine appearance in the markets.

Let strawberry growers learn a lesson from this experience. The man whose fruit tops the Portland markets, and any other strawberry grower who would build up a trade upon which he may rely season in and season out, is the grower who insists upon producing nothing but that which satisfies the highest ideals of strawberry excellence. When he has produced fruit of that kind let him label it with his name and address and his telephone number, and people having eaten once of his fruit will seek him out and beg for more. Emerson says: "If a man can write a better book, preach a better sermon, or make a better mouse trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."

To be a little more explicit, however, let me say that our own experience and the experience of other prominent strawberry growers has been that the correct way to dispose of the crop at best prices and in altogether the most satisfactory manner is to have the berries sold through the leading grocer in the market to which the crop is to go. Fix your price, and insist upon it, at which the grocer is to sell your fruit, and pay him an agreed price upon every box he sells. Let me repeat here, however, that this can be done only where the fruit is so much finer in appearance and better in quality than that which the "other fellow" puts upon the market as to command and maintain the fixed price.

Anyone who has a rod of ground

Collins Orchard Tracts

CLOSE TO THE
FAMOUS MINERAL SPRINGS
AT

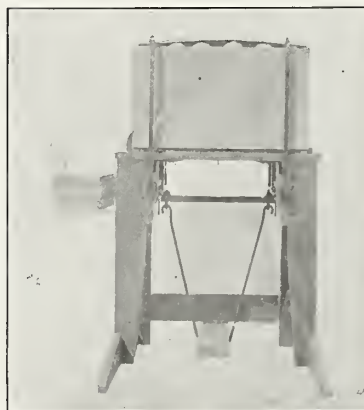
COLLINS

Skamania County, Washington

Opposite Hood River County, Oregon
On "North Bank" Road

Tract of 160 acres has just been subdivided into 5, 10 and 20-acre tracts and will be sold from \$70 to \$150 per acre. Each tract is well located, with plenty of water, and the soil is same nature as at Hood River. Reasonable terms.

GEO. E. O'BRYON, Owner
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W.L. Goyett

The lightest, fastest, most durable and easy to work automatic apple box press made. Will pay for itself in one season. The new machine has spring cleat holders. Shipping weight 35 lbs. Price, f.o.b. Canon City, cash with order, \$7.50.

W. L. GOYETT

801 South Twelfth St.
Canon City, Colorado.

THERE IS BUT ONE HOOD RIVER THE HOME OF BETTER FRUIT

You have already heard of its famous fruits and wonderful income-paying orchards, its lovely climate and desirability for a home, but—

"THE HALF HAS NOT BEEN TOLD."

FOR ONE ACRE OR HUNDREDS, IMPROVED OR UNIMPROVED,

IT WILL PAY YOU TO WRITE OR SEE

HARTMAN & THOMPSON

Chamber of Commerce, Portland, Oregon

Or J. F. BATCHELDER, Hood River, Oregon

should grow strawberries. The feature of the home garden that always creates the greatest interest is the strawberry patch, and the family garden is incomplete without strawberries. However, all who own a rood of ground, and countless thousands who own acres of

ground, do not grow strawberries, and this makes one of the greatest business opportunities offered by horticulture. Statistics prove that strawberries yield more money to a given area than any other crop grown, which is an important consideration. Another considera-

tion is that no other horticultural enterprise may be started upon so small a capital, and a third is that no other branch of fruit growing makes such quick returns on the labor and capital invested. Here are three important facts which the thoughtful man cannot fail to recognize as being of prime importance. There is a fourth fact that increases the importance of the three first named, and it is that there is a steadily increasing demand and consumption of strawberries all over the land. It is a fact of common knowledge in the larger cities of the country that, whereas a few years ago strawberries came in by the case, they now come in by the carload; and whereas they were grown by square rods and by square acres, they are now grown by hundreds of acres by individuals and corporations, and are shipped from many sections in train-load lots. Within one week Wilmington, North Carolina, has shipped 1,168 carloads of strawberries, all grown within a limited radius of that city. Texas, Arkansas and Missouri are not far behind North Carolina in this direction, and now Northern Wisconsin and the Upper Peninsula of Michigan and Minnesota are growing late strawberries for Northern markets, and securing good prices for them. With the tremendous development of the Pacific Coast, which has been such a notable feature of the country's development during the last five years, there is an opportunity in that section of the country quite as great as that to be found anywhere else in the world. Indeed,

For Sale—White Salmon Apple Land

There is nothing better than White Salmon. This new district just opposite Hood River has a wonderful future. It is so new that you can get in on the ground floor and be in the finest location in all the West. We have for sale 160 acres of the finest apple land in the White Salmon Valley; lays extra well, soil the very best, near railroad station. Price \$100 per acre for the whole tract, or in forty-acre tracts at a slight advance. Part cash; balance terms. Address owners,

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The L-P Land Co.

Has many excellent opportunities for investors to secure desirable
LANDS AT LOW PRICES

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HOOD RIVER, OREGON

A FIVE-ACRE FRUIT FARM

In any one of the eight or ten irrigated valleys along the Northern Pacific will show you a splendid profit. A ten-acre orchard will make you rich.

Montana, Idaho, Washington and Oregon contain these fruitful lands in quantity sufficient to give every man who seeks it, an ideal home where he may live happily and grow wealthy.

THE SCENIC
HIGHWAY



THROUGH THE
LAND OF FORTUNE

For information about home-getting possibilities in the Northwest, write to

A. D. CHARLTON

Assistant General Passenger Agent, Portland

or

A. M. CLELAND

General Passenger Agent, St. Paul

SEE THE

UPPER HOOD RIVER VALLEY

The Best of Land

Plenty of Cheap Water

Prices \$125 to \$250 Per Acre for Unimproved to \$500 for Improved

Good Transportation Facilities

Unexcelled for
Apples and Strawberries

I Handle These Lands

W. H. Marshall

Dee, Oregon

wonderful achievements already have been noted in that section, but nothing has as yet been done that approximates to the possibilities of the situation.

I cannot too strongly urge at this point that it is quality that should command largest attention, for quality also involves quantity if the grower understands his business. If he knows where to buy his plants and how to care for them, and understands marketing conditions and how to reach the markets with his berries in the best possible condition, he will make a thousand dollars from his strawberries where the average

man, who goes at the work on the hit-or-miss plan, using indifferent plants, following indifferent methods—the up-to-date grower, we repeat, will make \$1,000 from an acre where the “other fellow” will consider himself well off if he realizes one-fourth of the sum. Just as the man who puts out the Delicious apple tree realizes \$3.00 per box from the product of those trees, so will the man who grows highest-quality strawberries on soil that is especially fitted for the work, receive great rewards for his labor and intelligent methods of conducting his enterprise. And one of the most encouraging things about all of this is that there is no guess-work about it, no possibility of error. It is simply the inevitable effect of an adequate cause, and the result is as certain as are the processes of gravitation.

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FOR SALE

The best apple orchard in this country; 20 acres, all in full bearing, with 30 acres unimproved land and 5 acres nearly cleared; all fine pasture; orchard thoroughly sprayed and cultivated, with every prospect of a large crop, that will net more than half the price asked. Price \$10,000; terms. Address Box 233, Independence, Oregon.

Choice Fruit Land

**Yakima and Benton Counties
 Washington**

AT WHOLESALE
 (Price of wheat lands)

Yakima Realty and Investment Co.

12 East Yakima Ave., North Yakima, Wash.
 805 Third Ave., Seattle, Wash.
 317-319 Palace Bldg., Minneapolis, Minn.

Hood River

MR. FRUIT GROWER: You take no chances in investing in orchard lands here. We have listed with us for sale 2000 acres of choice apple land; in tracts from 5 to 200 acres. Highly improved, partly improved and unimproved, ranging in prices from \$25 to \$2000 per acre. Send for our complete list of orchard tracts. It will be money in your pockets to see us before investigating. Orchard lands our specialty.

W. S. NICHOL, Hood River, Oregon

YOUR ATTENTION PLEASE

We wish to call your attention to our large line of nursery stock. If you contemplate buying in large or small quantities you cannot do better than to write us before definitely placing your order. We can interest you, and we think we can convince you of the superiority of our stock.

We specialize in the growing of fruit trees, and are prepared to handle all orders. No order is too small to receive our careful attention, and none too large for us to handle. If first-class stock, efficient service and courteous treatment counts with you, then we are certainly after your order. Drop us a line **now**. It won't obligate you to buy. We wish to get in touch with you and to learn your needs. It will be to our mutual benefit. Write now, today.

YAKIMA VALLEY NURSERY COMPANY

North Yakima, Washington

Write for catalog

Agents wanted

THE OREGON APPLE ORCHARDS CO. ARE
SELLING

ORCHARD TRACTS

*That Possess Every Requirement of
First-Class Apple Lands*

They lie on the east side of the Coast Range of mountains, at an altitude of 800 feet, and are in what is known as the frostless belt. They are also protected by hills higher up from the winds of the west and south. They have perfect air drainage, also water drainage.

The soil is a rich and deep loam, with no hardpan or rocks, and our lands are all cleared of timber and stumps, so are ready for the planting of the trees, losing you no time for the ground to be cleared. We expect to have the entire tract planted to trees this fall.

The land is offered for sale in tracts of five acres or more at \$250 per acre, planted and cared for for one year, and on easy payments, viz: One-fifth down and two per cent per month on the balance until paid for.

It lies in Benton County, adjoining Alpine station on the Corvallis & Alsea River Railroad, with R. F. D., rural phone, church, school, stores and all at the door right now (not to come in the future). We are also in the rain belt, getting an average of forty-four inches of rain each year, and never suffer from lack of moisture.

Our contract is a liberal one, granting deed when half paid for. Extension of time for sickness. Free deed in case of death. A receipt for your money in case you are unable to continue your payments, this receipt being accepted at face value at any future time on a new purchase. With all this, our section is less liable to apple diseases than most others, and our trees mature earlier on account of the long growing season.

Write us and let us give you facts about our section and also show you that we are selling our land for just half what others are charging. You read "Better Fruit," so you know what the returns are from a first-class apple tract.

Oregon Apple Orchards Co.
Portland, Oregon

N. B.—We want a few salesmen to represent us.

CHEHALEM MOUNTAIN ORCHARDS

One Thousand Acres

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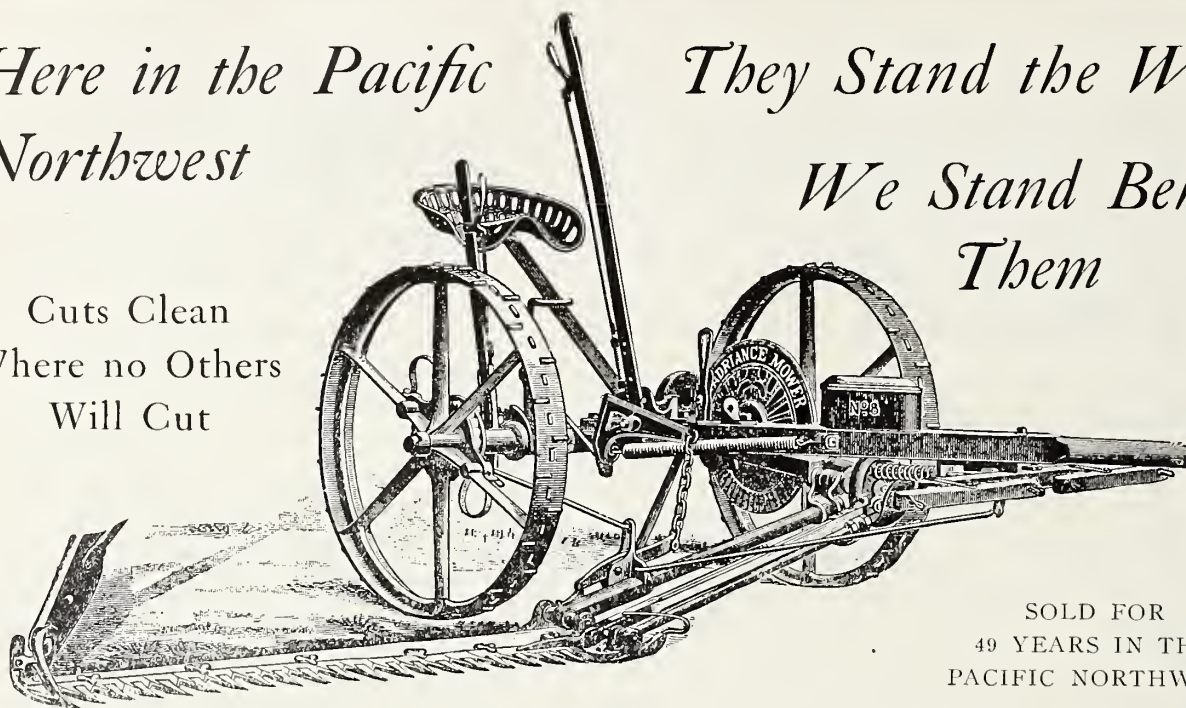
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Automatic Spring Draft—Prevents damage when striking an obstruction; saves driver, team and mower from shock or strain; greatly lessens average draft.

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COMMERCIALLY—Hood River has received the highest price for apples over any other fruit section since 1900. One man has received \$1,900 per acre for his crop. The average profit for bearing orchards is \$500 per acre.

SOCIALLY—Hood River is the home of retired business men, professional men, men of character and ability; a University Club with 135 members, 117 of them fruit growers; a constant interchange of social life between the town and valley; your neighbors are intelligent, educated people.

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PROSPECTIVE—Plenty of good land awaits the man of push and vim, who desires to get back to nature to the greatest work in the world and allow his orchard to produce for him a handsome income in a valley that is the standard by which all sections are measured, where the experimental stage has been passed and success is proven and assured; the specialty valley where 90 per cent of the trees are Newtowns and Spitzenbergs; where only one kind of strawberry is grown, the Clark Seedling; the only section in the world where the fruit growers own their own warehouses, cold storage plants and irrigating systems. Electric lights, telephone system; and rural free delivery throughout the valley. Pure mountain drinking water.

WRITE TO THE SECRETARY OF THE COMMERCIAL CLUB ASKING FOR BOOKLET GIVING FULLER INFORMATION. HOOD RIVER, OREGON

SOME OF THE PRESS OPINIONS OF BETTER FRUIT

BETTER FRUIT, a well known horticultural publication of Hood River, Oregon, issued for November an irrigation edition. The number contains a great many articles of value and importance from writers of information and authority. It is profusely illustrated and beautifully printed, and has altogether 100 pages of interesting matter. The editor furnishes an illuminating article on "Prospective Future of the Northwest," which is given herewith:

"In this edition we have endeavored to indicate the immensity of the Northwest territory, with its wonderful possibilities and opportunities. In the seven states, Washington, Oregon, Idaho, Montana, the Dakotas and Minnesota, there are about 400,000,000 acres, which is double the area of New England and the Middle states. Of this, 100,000,000 acres in round numbers is subject to homestead. Fifty million acres in these states will produce a crop of \$800,000,000. Think of the possibilities where the area which is not producing is eight times the producing area, and if this were all under cultivation at the present rate of productiveness the output would be something over \$6,000,000,000. Of course there is considerable waste land, yet there awaits 100,000,000 acres available as homesteads. All of this land in the Northwest that is suitable to fruit will support a family on ten acres, yes, even less; probably five. Some comprehension of the existing opportunities is evident when from \$50 to \$100 per acre can be made on land growing alfalfa; from \$100 to \$500 in truck gardening, and from \$300 to \$1,000 in fruit growing. There are yields where the net profits in fruit growing have been from \$1,000 to \$3,000 per acre; however, most any conservative man will say that from \$100 to \$1,000 per acre can be cleared on fruit raising, according to location, the varieties of fruit and the man.

"No one can realize the importance of irrigation on these vast areas without being familiar with the results. We have endeavored in this number to give the readers some idea of the immensity of

the territory to be settled, the methods of doing it and the profits that can be made and the opportunities that exist. Land that is valueless without water, with irrigation becomes worth from \$500 to \$3,000 and \$4,000 per acre, and some has been sold at even higher than \$4,000 in bearing orchard. Irrigation is probably today the most important feature in connection with the development of the West. We therefore call this the Irrigation Number, and we have added the slogan, which is not original, Water Is Life, Water Is Power, Water Is Gold, and in the words of some other eloquent individual, Water Is King. With it man absolutely becomes master of the soil and is not dependent on rain or nature. With it a crop is a certainty under all conditions. Land can be secured under the Carey Act, in government projects and under private canal systems, at exceedingly low figures. Improved property can be purchased at extremely reasonable prices.

"Good land can be purchased with water rights from about \$50 per acre up, according to locality, distance from a railroad, etc., and in another article in this paper we will publish a list comprising most of the towns having commercial clubs or development leagues, and by writing the secretary of the commercial club in any of the cities mentioned on the list booklets and other information can be secured which will give one a splendid idea of the opportunities, prices of land and a good description of the country."—The Oregonian.

The February number of "Better Fruit" reached our exchange table this week, bright, clean and clear and chuck full of meaty matter and elegant illustrations. This is a special "spraying edition"—a seasonable subject thoroughly handled, as this journal is in the habit of dealing with such topics at the right time. As a special horticultural journal "Better Fruit" is in a class by itself and is one of the most potent factors in the development of the horticultural interests of the Northwest.

Every copy is worth a year's subscription price to the orchardist and it should be a regular visitor to the home of every one in the Northwest who maintains a family or commercial orchard.—Portland Rural Spirit.

"Better Fruit," a well known horticultural publication of Hood River, issued for November an irrigation edition. The number contains a great many articles of value and importance from writers of information and authority. It is profusely illustrated and beautifully printed, and has altogether 100 pages of interesting matter. The editor furnishes an illuminating article on "Prospective Future of the Northwest."—Nampa Herald.

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Superb Dahlias introduced by us here at the same time as their announcement abroad

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MODELL—One of the grandest Cactus Dahlias known. Of wax yellow color, with a lovely blush sheen over the end of petals. The perfectly formed flowers, of great keeping quality, make it truly a "model" Dahlia in every respect.

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One dozen plants each of the 12 varieties, \$12.00; per plant, \$1.25.

For complete list of finest Dahlias, including the new peony-flowered type, see our general catalog. It will pay you to be on our mailing list.

We issue the following catalogs and will mail them free on request. They are complete buyers' guides.

Our General Catalog and Seed Planters' Guide—A complete catalog of Seeds and Supplies.

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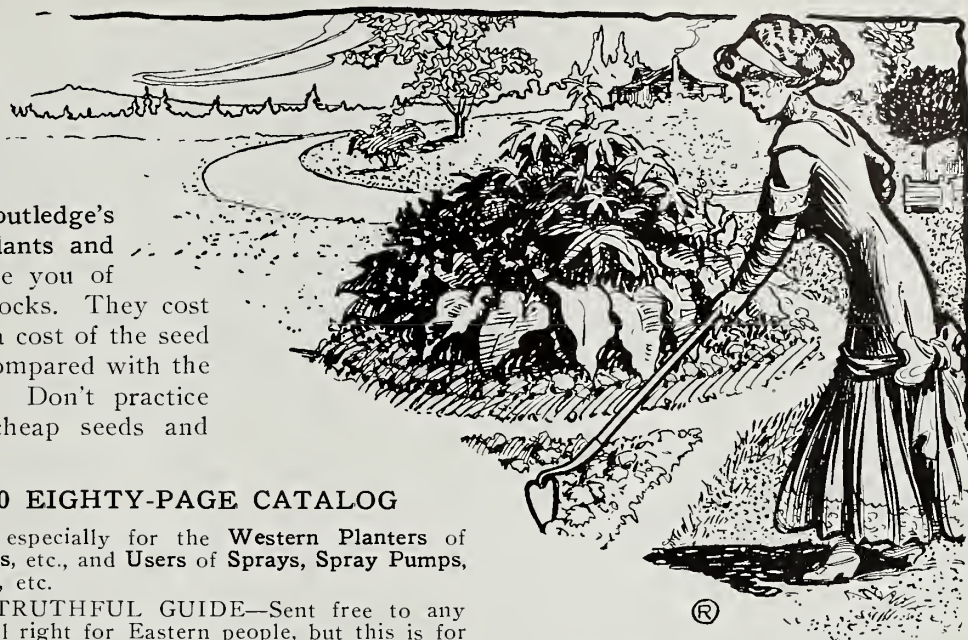
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The most satisfactory and desirable summer and fall blooming flowers, and they are of the easiest culture. We are making a specialty of Dahlias and Gladioli, and offer you a superb collection of new and rare varieties. See our Spring Catalog for full descriptions and prices.

Editorial—Continued from page 54

our command, and we submit it to our subscribers and the public for their approval, hoping it will be appreciated. It might be better. It might be greater. It might be handsomer; but we believe it is good, we believe it is instructive, we believe it will help to improve country life, we believe it will help to make the fruit grower happier, we believe it will help to make his home more beautiful and to keep the boys on the farm, we believe it will help the Northwest, we believe it will help the great United States, and we believe that this edition of "Better Fruit" is the best we have ever produced. ♦ ♦ ♦

COUNTRY LIFE IDEA.—Ex-President Roosevelt, a man admired as much, perhaps, as any other man in the world today, showed his good judgment in forming the Country Life Commission. It was not sentiment alone. The stability, the strength and the wealth, the fighting power of a nation, is dependent upon the farming community. The country feeds the city, consequently it must be essential to improve country life in every way, because the more attractive country life and the better methods in vogue the more successful and better the produce, and the better food the city will get, at the same time increasing both the strength and the vitality and the happiness of the city people as well as the country people. The home is a part of the country life, and to make it beautiful is a duty we owe ourselves and

our country. Roses will help do it, consequently it seems fitting that the beautiful city of Portland should stimulate this idea for the welfare of the State of Oregon and the Northwest in general.

Governor Benson, realizing that "Better Fruit" is an important factor in the development of country life in Oregon, honored the editor with an appointment on the Country Life Commission of our state, and consequently the editor feels it to be the duty of "Better Fruit" to do its share in carrying out the idea of beautifying the homes in the country, and therefore has produced this floral edition of "Better Fruit," which we style the Portland Rose Festival number, because the city of Portland deserves the credit for originating this festival in the Northwest and promises to make this, the fourth annual Rose Festival for the city of Portland, the greatest of all ever given. ♦ ♦ ♦

THE JUNE ISSUE of "Better Fruit" will contain some good articles about small fruits and also a number of articles on technical subjects of practical value to the fruit grower.

J. F. LITTOOY

CONSULTING HORTICULTURIST

Orchard director, orchard plans examined shrub Orchard director, orchard schemes examined, orchard plans submitted, orchard soils and sites selected, nurseries visited and stock selected, values examined for farm loans, purchasing agent for land and orchard investments, acts as power of attorney in selection of Carey Act lands.

MOUNTAIN HOME, IDAHO

ARE YOU AN ELEVENTH-HOUR MAN?

Do you wait until the last of the season before ordering your nursery stock, or do you take time by the forelock and place your order months ahead of delivery time?

In the season just closing we have turned away a good many eleventh-hour men because we could not fill their orders. Some of them, profiting by their experience, have already placed their order for next season's delivery. They are not going to get disappointed again.

Decide on what you will want and order as soon as possible.

We are preparing to meet the heavy demand of the coming season by putting in a larger plant than ever before.

We are better prepared than ever before to give you first-class stock. Our planting this season will be in the hands of men of long experience in the business, men who have made this their life work, men who understand the science of tree growing and who produce the finest tree possible for skill and labor to produce.

If you intend to plant 10 trees or 10,000, write us before placing your order. We shall be glad to answer any and all inquiries you may make.

CATALOG ON APPLICATION

Agents wanted

YAKIMA VALLEY NURSERY COMPANY

Toppenish, Washington

WORK IN NEW YORK WITH THE CODLING MOTH

BY E. P. FELT, STATE ENTOMOLOGIST OF NEW YORK

THE best method of controlling the codling moth has been the subject of extended discussions, and in recent years some very strong statements have been made in favor of employing a rather coarse spray and an unusually high pressure in an effort to drive the spray into the lower calyx cavity—that is, the cavity below the stamens. It will be recalled by all familiar with the apple that after the white petals have dropped, we have the green calyx lobes, and within a ring of numerous upright slender stamens surrounding the central fleshy pistil. Below the stamens and at the base of the pistil there is an appreciable cavity. This is the place, according to some authorities, where the poison must be put if we would obtain fairly satisfactory results. One writer has even gone so far as to declare that if spraying is not done in this manner the small apple worm is fairly safe, since it rarely eats before it gets down into the lower cup, and the poison sprayed on the outside will not affect it. So much emphasis was laid upon this method of spraying that the problem seemed one worthy of careful demonstration, and a series of experiments was therefore planned for this purpose.

After some trouble, nearly ideal conditions were found in the large young orchard of W. H. Hart of Arlington, New York. The trees were thrifty, about fifteen years old, fifteen to eighteen feet high and thirty feet apart. Each plat consisted of forty-two trees, six in a row one way and seven in a row the other, the central six being experimental trees, invariably Baldwins, though some of the barrier trees were Northern Spies. The actual experimental trees were carefully selected to obtain uniformity in size, fruitage and infestation so far as possible. There appeared to be a moderately uniform codling moth infestation throughout the orchard, a judgment later sustained by the results obtained. It was planned to make comparisons between a coarse, driving spray, such as that produced by a typical bordeaux nozzle with a pressure of about 150 pounds, and the finer, misty spray of a vermored nozzle with a pressure of approximately 125 pounds. In the actual experimental work, a Friend nozzle was used as one of the better forms of the vermored type. Comparisons were made between single sprays of each of the above mentioned kinds, applied just after the blossoms fell; between two sprays of each kind, one given just after the blossoms fell

and the second just before the sepals closed, and, finally, between two such sprays and a third, applied to both of these plats alike with a Friend nozzle the last week in July for the purpose of destroying the second brood. The same nozzle was used in midsummer on the two plats receiving three applications, because in this latest spraying there was no necessity for attempting to drive the poison to the bottom of the calyx cavity, and we simply employed the nozzle which gave the most satisfactory distribution of the insecticide

All the applications were made by practical orchardists working under our supervision, a particularly to hit the tips of the young apples with the spray. The bordeaux nozzles were set to give a maximum of rather coarse spray which would not break up into fine drops till about six feet from the nozzle, and an effort was made to drive the poison straight down into the tip of every young fruit, the nozzle being held about eighteen to twenty-four inches from the tip of the branches, so far as possible, and the pressure being maintained at about 150 pounds. This pressure gave a stiff spray that penetrated to the middle of the tree and repeatedly passed the stamens and collected in the lower cavity, especially during the

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We have them, strong, well-grown one-year vines, finest in the land

How do BARTLETTS strike you this season? Plenty of them, stock cannot be beaten, and prices right. Then how's SPITZENBERG, YELLOW NEWTOWN PIPPIN and YELLOW BELLEFLEUR?

One nurseryman visiting our Nursery said, "Gentlemen, you should be proud of this stock." And we are. So will you be when you plant it.

What about CHERRIES? BING, LAMBERT, BLACK TARTARIAN, ROYAL ANNE and CHAPMAN. It would not be hard to sell you these, could you see them.

PEACHES, stocky, well grown, and, say, they have the roots, plenty of them, and not cut off at top of ground.

Another thing: Our prices are RIGHT, we dig our stock RIGHT, handle it RIGHT, treat you RIGHT, and it is sure RIGHT in every way. Write us and we will tell you all about it. Better still, come and see us and we will show you.

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50,000 Peach

4,000 Comice Pear

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Flame Tokay, Black Cornichon, Black Hamburg, Black Gros Colman, Black Muscat, Muscat, Rose of Peru, Black Ferrara and other fresh, healthy cuttings for delivery this winter.

Prices (reasonable) on application
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first application at the time the stamens were fresh. Later, after the stamen bars had withered a little, an examination showed that the dried tips of these organs were likely to become entangled and present an effective barrier to the passage of the insecticide. In practice it was found much more difficult to cover a tree with this bordeaux type of nozzle than it was with the much broader and more evenly distributed spray delivered by the vermored nozzle. The difference was so marked that much greater care was necessary to secure equally thorough work with the bordeaux nozzle, though it should be observed in this connection that the penetration from the vermored nozzle was not as great, even in the case of the first application, while conditions were most favorable.

The trees were sprayed with five and a quarter pounds of Grasselli's arsenate of lead and ten pounds of copper sulphate to each 150 gallons of spray, enough lime being added to neutralize the copper sulphate, as determined by the ferro-cyanide test. The first application was made May 20, the second May 31 and the third July 28. Two check trees were left in the immediate vicinity of the experimental plot.

The fruit developed very satisfactorily through the season, aside from somewhat severe injury by plant lice, a factor hardly affecting the experiments with the codling moth, though possibly reducing the percentage of wormy apples, as will be pointed out later. Dropped apples were collected September 13 and 14, carefully sorted and classified, and the fruit picked October 5 to 7, and likewise carefully classified. It should be noted in passing that the dropped fruit from the various experimental plots gave from 14.91 to 26.67 per cent of wormy fruit, while the two check trees had 73.91 and 81.02 per cent, respectively, of wormy fruit. These figures are chiefly interesting because they show, as is well known by many, that a large percentage of the wormy fruit drops before picking time. Bringing together the figures obtained from the earlier fallen fruit and those secured at the time of final picking, we find that the three plots sprayed with the vermored type of nozzle produced 98.81 to 98.99 per cent of worm-free fruit, the higher percentage being obtained on the plot having the three applications. Similarly, the three plots sprayed with the bordeaux nozzle produced 98.55 to 99 per cent of worm-free fruit, the slightly higher percentage being secured on the plot receiving three applications. On the other hand, the check trees produced but 72.73 per cent of worm-free fruit; thus it is safe to say that under conditions obtaining last season in the Hudson Valley it was possible, by making one thorough application of poison, to protect from codling moth injury an additional 25 per cent of the fruit and to reduce the infestation to less than 2 per cent.

These figures are certainly very gratifying, and owing to the high percentage obtained from one application, it is impossible to secure a very marked benefit from a second or a third treatment. Nevertheless, the benefit from the second and third sprayings may be somewhat more than appears to be indicated by the figures, since it will be found, on referring to the detailed data to be published later, that without any premeditated unfairness, the plots sprayed but once produced the largest number of apples, namely, in round figures thirty

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Will have our usual offering of apple, pear, cherry and peach trees for fall of 1910.

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WITH JACK LONDON**

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and twenty thousand, while the two plats sprayed three times produced nine and seven thousand respectively. The possible bearing of this on the results will be seen if we refer to the records of individual trees. One producing nearly nine thousand fruits had but 0.63 of 1 per cent wormy, while another tree in the same plat bearing but twenty-five hundred apples had 3.16 per cent wormy. Similar conditions were found in other plats. Obviously, if a certain number of codling moth larvae survive for each tree, the largest percentage of infestation will be found on trees producing the least fruit. This is a matter of some importance in the practical control of this insect, since it suggests that at least some, and possibly a considerable proportion of the young codling moth larvae perish because they secure their first dose of poison on the foliage, the surface of the fruit or the outer calyx cavity, rather than as has been suggested by some writers, in the inner calyx cavity.

Examinations made at the time of spraying convinced us that in the case of the plats sprayed with the vermored type of nozzle, at least, there was in comparatively few instances what might be regarded as a satisfactory penetration of the poison to the lower calyx cavity, and despite repeated efforts to secure an ideal condition with the coarse spray applied with the bordeaux nozzle at a pres-

sure of 150 pounds or thereabouts, we were by no means satisfied that an even reasonably high proportion of the blossoms had the spray driven into this lower cavity. The percentage comparisons between the two types of nozzles, based as it was on a careful examination of about 100,000 apples under nearly uniform conditions, does not justify the conclusion that there is a marked superiority gained in the employment of one type of nozzle.

A part of these experiments were duplicated under somewhat similar conditions on the farm of Edward Van Alstyne at Kinderhook, New York. The trees in this latter orchard were somewhat older and the infestation by codling moth was presumably a little greater. Owing to the small number of trees, it was possible only to make comparisons between one spray with the bordeaux nozzle and one with the vermored type, in connection with a third experiment which was designed to test still further the possible superiority of a high pressure. The plats were laid out as in the preceding experiment. The sprays were applied just after the blossoms fell and observations made upon the trees from time to time during the season.

Very nearly the same results were secured, if we make a slight allowance for the difference in conditions. The first two plats sprayed with the different types of nozzle gave respectively 98.96 and 98.27 per cent of worm-free fruit, the slightly

lower percentage being obtained on trees sprayed with the bordeaux type of nozzle, where the penetration to the lower calyx cavity was presumably somewhat greater. The third plat, in which an effort was made to keep the pressure at nearly 200 pounds, gave but 97.52 per cent of clean fruit. The reason for this discrepancy is not an inefficiency resulting from the higher pressure, but in all probability is due to a lack of thoroughness in application, since only 95.06 per cent of worm-free fruit occurred on one tree where the application was not quite as thorough as it should have been. This obviously reduced the percentage for the entire plat materially. Two check trees were also reserved in this orchard and produced but 73.08 per cent of worm-free fruit.

It will be seen from the foregoing that the results obtained in the Arlington orchard were strikingly paralleled by those secured at Kinderhook. Furthermore, a marked drop in the percentage of sound fruit, found in the case where the application was slightly below the standard, suggests in no uncertain terms the supreme importance of thoroughness in treatment. By this I do not mean thoroughness in an effort to drive the poison into the lower calyx cavity, desirable though this may be on theoretical grounds, but thoroughness in covering the foliage, the young fruit and in particular the blossom end with the poison.

Seventy-five Acres of Roses

SHADE TREES, EVERGREENS, SHRUBBERY, AND VINES

OF ALL KINDS TO BEAUTIFY YOUR HOME

We sell direct to the planter through our authorized traveling salesmen

If one of them doesn't call on you, write direct to us

HERE IS A PARTIAL LIST OF VERY DESIRABLE ORNAMENTAL TREES AND SHRUBS
SUITABLE FOR YARD OR LAWN PLANTING

DECIDUOUS TREES—Alder (cut leaf), Ailanthus, Birch (different kinds), Catalpa (different kinds), Fringe Tree, Coffee Tree, Magnolias, Maples, Judas Tree, Maiden Hair Tree, Paul's Double Flowering Thorn, etc., etc.

EVERGREENS—Arbor Vitaes, Cedars, Cypress, Firs, Pines, Retinosporas, Spruce, Yews, etc., etc.

SHRUBS—Althea, Azalea, Calycanthus, Deutzia, Elaeagnus, Dogwood, Forsythia, Hydrangeas, Honey-suckles, Lilacs, Snowballs, Snowberry, Spirea, Syringa, Weigela, English Holly, Rhododendrons, Climbing Vines and Ivy and hundreds of

ROSES

Of the choicest and hardiest varieties. Being two-year-old bushes and "field grown," you get strong, vigorous plants with well developed roots. Stop wasting your time with small, puny hothouse plants; plant Orenco rosebushes and PICK ROSES.



CUT OUT THIS AD and send it in with your order for any kind of Nursery Stock, Rosebushes, etc., and we will credit you

50 cents on a \$5.00 order or \$1.25 on a \$10.00 order

For complete list of what we grow, get our big illustrated catalog.

OREGON NURSERY COMPANY

Reliable salesmen wanted

ORENCO, OREGON

"THE OLD RELIABLE"

Albany Nurseries

Incorporated

ALBANY, OREGON

LARGE STOCK, FIRST-CLASS TREES

Place Your Orders Now

CATALOGUE FREE

MORE SALESMEN WANTED

WE WERE AWARDED

Gold Medal

AT THE

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In Seattle, 1909

FOR DISPLAY OF

NURSERY STOCK

**The Sunnyside Nursery
Company**

Incorporated \$100,000

Main Office and Nurseries at Sunnyside, Wash.

A REPUTATION TO SUSTAIN

**VINELAND
NURSERIES
COMPANY**

PROPAGATORS OF

**RELIABLE NURSERY
STOCK**All stock budded from bearing
Trees, Fruit and Ornamental

CLARKSTON, WASHINGTON

It should not be understood that the above results are unsubstantiated by other data. An outline of this paper was submitted at the recent meeting of the American Association of Economic Entomologists. At that session Professor Runsey of West Virginia said that he had obtained practically the same results, while Professor Sanderson of New Hampshire declared that our data agreed with results he had secured. It has long been recognized by entomologists that the first spraying for the codling moth was by far the most important. Some years ago Professor E. D. Ball of Utah, in an extended paper before the New York meeting of the Association of Economic Entomologists, demonstrated the great utility of this first application.

With these data before us, we cannot but conclude that one very thorough application of a poison within a week or ten days after the blossoms fall will, under normal conditions, result in protecting a very large percentage of the fruit from codling moth injury. I would emphasize most strongly the necessity of thorough work, and advise the selection of a nozzle which will give the most uniform and rapid application without regard to the penetration of the lower calyx cavity.

**\$200,000 PER DAY**

*This Is the Remarkable Sales Record Now Being
Made by Overland Automobiles—Due
to a Simple Car*

It is announced that the 800 Overland dealers are now taking orders for these remarkable cars at the rate of \$200,000 per day. Never before has there been such a demand for any make of automobile.

In addition, a large number of storekeepers are ordering these cars for making their deliveries. The government has begun to use them in the city postal service. And numerous manufacturers, who are sending salesmen in country districts, are equipping these salesmen with Overland cars.

The utter simplicity of Overland cars has opened up many entirely new fields. The pedal control enables a novice to master the car in ten minutes. And the freedom from trouble enables even a child to run and to care for it.

The Overland people this year have cut their costs 20 per cent through enormous production and automatic machinery. They are selling a 25-horsepower car for \$1,000, and all their other styles in proportion. This has undoubtedly been another great factor in the tremendous demand for these cars.

Mr. John N. Willys, president of the Willys-Overland Co. of Toledo, Ohio, gives the whole credit for the Overland success to his able engineers and designers. It is a natural result, he says, of creating a simple and trouble-proof car, and of making so many that the cost is brought down to the minimum.

The demand for Overland cars has multiplied five times in the past year, and one dealer in Texas has already ordered 3,500 Overlands to be delivered next year. Four enormous factories are now making the cars, and a fifth is being equipped. So it looks as if the preference for Overlands was going to continue to grow. (63)



Almost the whole world knows of Hood River as a place that produces the best fruits, and all of Hood River Valley should know, and could know, that there is one place in Hood River, under the firm name of R. B. Bragg & Co., where the people can depend on getting most reliable dry goods, clothing, shoes and groceries at the most reasonable prices that are possible; try it.

**For Northwest Fruit Growers
in General**

A FULL STOCK OF

**Spitzenberg
Jonathan, Winesaps
Rome Beauties
Etc.**

31 YEARS IN BUSINESS

Milton Nursery Company

A. MILLER & SONS, Incorporators

MILTON, OREGON

**SPRING SHIPMENTS
NOW ON**

But we are already planning the biggest selling campaign in our history for fall 1910 and spring 1911.

We told you in our last ad of our enormous planting for next season's selling.

Those figures are almost beyond believing, but they are all true. A year or two ago they would have almost "paralyzed" us, for we would not have known when we would dispose of the stock.

It's different now. Our stock has proven itself in so many localities and has "made good" in the hands of so many thousands of customers that we have difficulty in growing enough stock.

This year we've planned to meet the demand. If five million apples, two hundred and seventy thousand pears, one hundred and fifty thousand cherries, and a million four hundred thousand peach, plum, prune and apricot will help any, we will be ready. That's our plant for 1910, besides seedlings, seeds, etc.

Watch for our salesman, send for our catalogue, and write us your wants.

**Washington
Nursery
Company**

TOPPENISH, WASHINGTON

Agents Everywhere

More Wanted

WALNUTS

GRAFTED FRANQUETTE TREES

IF YOU WANT the best of anything, go to one who specializes on that thing. We are offering the best that can be produced in the walnut line. Grafts selected only from our heaviest bearing trees of Vrooman strain and grafted on the best selected California and Royal hybrid roots grown. Also, on the same rapid-growing roots, Mayette, Parisienne, Meylan, Bijou, San Jose Mayette, etc., or any local variety of which you have grafts, if ordered a year in advance. Write for catalogue and price list.

IMPERIAL WALNUT NURSERY

R. F. D. No. 7

San Jose, California

Hood River Nurseries

Have for the coming season a very complete line of

NURSERY STOCK

Newtown and Spitzenberg propagated from selected bearing trees. Make no mistake, but start your orchard right. Plant generation trees. Hood River (Clark Seedling) strawberry plants in quantities to suit. Send for prices

RAWSON & STANTON, Hood River, Oregon



When you get to Hood River
stop at the

MT. HOOD HOTEL

Trains stop directly in front
of hotel. Bus meets all boats

Automobile service daily for
Cloud Cap Inn during months
of July, August and September

All Fruit Growers



Make
Their Headquarters
at

The Portland

H. L. BOWERS Manager Portland, Oregon

"LESLIE" SALT NOW LEADS THE WORLD

New Refinery at San Mateo Plant Places
It Ahead of All Competitors

From San Mateo Times, January 15, 1910

C. E. Whitney & Co., proprietors of the "Leslie" salt, are just completing a new salt refinery at their plant in San Mateo, California, which, with other improvements, aggregates a cost of over \$120,000. The result is that they have now what they consider one of the three most efficient salt refining plants in the world.

The process is continuous from the time the salt is shoveled up in the crystallizing fields until it is shot into the cars; its progress is entirely automatic. The product turned out is of the vacuum process, which is the very acme of high grade production, and San Mateo may boast of turning out as fine salt as any, if not the finest made in the world.

C. E. Whitney & Co. is the only firm on the Pacific Coast which is recrystallizing salt. This means that every crystal, from the finest table salt to the coarse butcher's salt, is a perfect crystal, as formed by nature, and not mutilated by the grinding process which is used by all others on the Coast. It is exactly the same process that is used by the manufacturers of the very highest grade salts that are imported now for buttermaking and other purposes for which the ground salt cannot be used.

The Leslie Salt Company has about 2,000 acres adjoining the City of San Mateo, about 1,500 acres of which are under levees and flooded with water. The ocean water contains about $2\frac{1}{2}$ per cent of salt. The process is to carry it from the larger ponds, the first of which contains about 500 acres, down to successively smaller ponds until the evaporation concentrates the water until it will not hold any more salt in solution, when it precipitates into the salt beds made for that purpose and is shoveled into the cars for refining.

The present output of these works is about 15,000 tons or 30,000,000 pounds per annum. The annual vertical evaporation averages about fifty inches. Deducting from this the average rainfall of twenty-two inches, there remains a net annual evaporation of twenty-eight

inches. Theoretically, this amount of evaporation should produce on the 1,500 acres about 100,000 tons of salt per annum. Practice shows, however, that the ultimate result is only about 15 per cent of this, and this only after ten years of so-called "salting down."

The power of the wind and sun in the process of evaporation is enormous. The average weight of water lifted from these 1,500 acres on a good summer's day is about 40,000 tons, or the enormous quantity of 4,500,000 tons per year, besides the rainfall.

The "Leslie" salt is well known all

WONDER OIL LAMP

Sent To Your Home



We want you to try in your own home, without risk or expense, our marvelous new, 100 candle power Wonder Oil Lamp, generates its own gas from common coal oil—burns on incandescent mantle. Six times cheaper than old style lamp and far more brilliant than electricity or gas. 40,000 families now using. The price of this lamp is \$6.00, but to introduce it quickly, we will make one person in each locality a **Special Free Offer**. Remember, if you accept our offer we send the Wonder Lamp, express prepaid. We want to place one for demonstration purposes in your home and ask that you recommend it to your neighbors. Let the Wonder Lamp light your home. Simply send your name and address today.

United Factories Co., Dept. 1 Kansas City, Mo.

FINE BABY CHICKS EIGHT CENTS EACH

Leghorns, Wyandottes, R. I. Reds, Minorcas, Langshans, Orpingtons, Plymouth Rocks, etc. All fine stock. Partly grown chicks, 30 cents each. Eggs for hatching, \$4.00 per 100. We guarantee safe arrival anywhere. Booklet free.

CULVER POULTRY FARM

121 Broadway Benson, Nebraska, U. S. A.

Lest You Forget!

Quality tells always. The name "PEARSON" on a keg of Cement Coated Nails is a guarantee of full count, best quality, the very best product of the mill.

The only nail to use in fruit boxes. Avoid imitations by always ordering

"PEARSON" NAILS

No others are as good. Conscientious merchants will not try to substitute other brands. They know better.

For sale by
hardware dealers everywhere

J. C. PEARSON CO.

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Pacific Coast Sales Agents

OLDEST LIVERY COMPANY
IN THE VALLEY

TRANSFER & LIVERY CO.

Special attention to commercial
men, camping & fishing parties

TELEPHONE MAIN 131

HOOD RIVER, OREGON

over the Pacific Coast, and the fact that it is the only salt manufactured on the Coast that can be used for buttermaking and other high grade purposes demonstrates that the recrystallizing process is the only one that will make a really high grade article.

It is also interesting to note that the Golden Gate is the northern-most limit of possibility of making solar salt. North of that the rainfall is too great, but on the lower end of the bay there are about 10,000 acres of lowlands that are used in crystalizing salt. Besides, there is a small plant at Los Angeles and another small one at San Diego; but the territory for this purpose is quite limited, as it requires not only a dry climate, but also ocean water and the proper kind of land on which to lay out the beds. Aside from the southern part of the Pacific Coast, conditions permit the making of solar salt only in a few localities in Austria, France and Spain.

[Editorial Note—Salt being absolutely essential to human and animal life, the editor feels that this article will be particularly valuable to the readers of "Bet-

ter Fruit," because every fruit grower is interested in getting the best of salt, not only for table use, but also for stock. The editor of "Better Fruit" uses Leslie salt exclusively and as a personal favor the editor asks every subscriber of "Better Fruit" to call for Leslie salt at his grocery store, both for table use and for stock. If your grocer does not carry it, ask him to write to C. E. Whitney & Co., corner Market and Davis streets, San Francisco, California, and they will either fill the order direct for the grocer or give him the address of the Portland distributors. The editor requests every fruit grower as a personal favor to call for Leslie salt and to ask his grocer to carry it, for two reasons—because the editor uses Leslie salt and thinks it the best in the world, and because the manufacturer, Mr. Whitney, is a friend of thirty-four years' standing. Mr. Whitney and the editor of "Better Fruit" were classmates in the University of California in 1876, graduating in 1880. In another part of this edition will be found a full page ad. giving further particulars about Leslie's salt. Don't fail to read it.]



WANTED--A RIDER AGENT IN EACH TOWN

sample Latest Model "Ranger" bicycle furnished by us. Our agents everywhere are making money fast. Write for full particulars and special offer at once.

NO MONEY REQUIRED until you receive and approve of your bicycle. We ship to anyone, anywhere in the U. S. without a cent deposit in advance, *prepay freight*, and allow **TEN DAYS' FREE TRIAL** during which time you may ride the bicycle and put it to any test you wish. If you are then not perfectly satisfied or do not wish to keep the bicycle ship it back to us at our expense and *you will not be out one cent.*

FACTORY PRICES We furnish the highest grade bicycles it is possible to make at one small profit above actual factory cost. You save \$10 to \$25 middlemen's profits by buying direct of us and have the manufacturer's guarantee behind your bicycle. **DO NOT BUY** a bicycle or a pair of tires from anyone at any price until you receive our catalogues and learn our unheard of factory prices and remarkable special offers to rider agents.

YOU WILL BE ASTONISHED when you receive our beautiful catalogue and study our superb models at the *wonderfully low prices* we can make you this year. We sell the highest grade bicycles for less money than any other factory. We are satisfied with \$1.00 profit above factory cost. **BICYCLE DEALERS**, you can sell our bicycles under your own name plate at our prices. Orders filled the day received.

SECOND HAND BICYCLES. We do not regularly handle second hand bicycles, but usually have a number on hand taken in trade by our Chicago retail stores. These we clear out promptly at prices ranging from \$3 to \$10. Descriptive bargain lists mailed free. **COASTER-BRAKES,** single wheels, imported roller chains and pedals, parts, repairs and equipment of all kinds at *half the usual retail prices.*

\$8.50 HEDGETHORN PUNCTURE-PROOF \$4.80
SELF-HEALING TIRES A SAMPLE PAIR
TO INTRODUCE, ONLY

The regular retail price of these tires is \$8.50 per pair, but to introduce we will sell you a sample pair for \$4.80 (cash with order \$4.55).

NO MORE TROUBLE FROM PUNCTURES

NAILS, Tacks or Glass will not let the air out. Sixty thousand pairs sold last year. Over two hundred thousand pairs now in use.

DESCRIPTION: Made in all sizes. It is lively and easy riding, very durable and lined inside with a special quality of rubber, which never becomes porous and which closes up small punctures without allowing the air to escape. We have hundreds of letters from satisfied customers stating that their tires have only been pumped up once or twice in a whole season. They weigh no more than an ordinary tire, the puncture resisting qualities being given by several layers of thin, specially prepared fabric on the tread. The regular price of these tires is \$8.50 per pair, but for advertising purposes we are making a special factory price to the rider of only \$4.80 per pair. All orders shipped same day letter is received. We ship C. O. D. on approval. You do not pay a cent until you have examined and found them strictly as represented. We will allow a cash discount of 5 per cent (thereby making the price \$4.55 per pair) if you send **FULL CASH WITH ORDER**, and enclose this advertisement. You run no risk in sending us an order as the tires may be returned at OUR expense if for any reason they are not satisfactory on examination. We are perfectly reliable and money sent to us is as safe as in a bank. If you order a pair of these tires, you will find that they will ride easier, run faster, wear better, last longer and look finer than any tire you have ever used or seen at any price. We know that you will be so well pleased that when you want a bicycle you will give us your order. We want you to send us a trial order at once, hence this remarkable tire offer.

IF YOU NEED TIRES don't buy any kind at any price until you send for a pair of Hedgethorn Puncture-Proof tires on approval and trial at the special introductory price quoted above; or write for our big Tire and Sundry Catalogue which describes and quotes all makes and kinds of tires at about half the usual prices.

DO NOT WAIT but write us a postal today. **DO NOT THINK OF BUYING** a bicycle or a pair of tires from anyone until you know the new and wonderful offers we are making. It only costs a postal to learn everything. Write it **NOW.**

J. L. MEAD CYCLE COMPANY, CHICAGO, ILL.



Notice the thick rubber tread "A" and puncture strips "B" and "D," also rim strip "H" to prevent rim cutting. This tire will outlast any other make—**SOFT, ELASTIC and EASY RIDING.**



.25-20



Model 1894

Repeating Rifle

This rifle is built for settled districts, where good range and killing power are desired, with safety to the neighborhood.

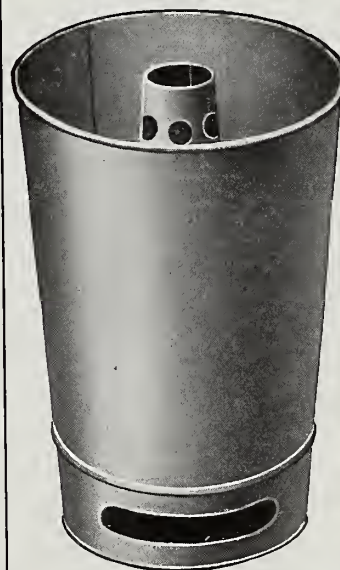
The *Marlin .25-20* is a light, quick-handling, finely-balanced repeater, with the solid top, closed-in breech and side ejection features which make *Marlin* guns safe and agreeable to use and certain in action.

It is made to use the powerful new high velocity smokeless loads with jacketed bullets as well as the well-known black powder and low pressure smokeless cartridges, and is the ideal rifle for target work, for woodchucks, geese, hawks, foxes, etc., up to 300 yards.

This rifle and ammunition, and all other *Marlin* repeaters, are fully described in our 136-page catalog. Free for 3 stamps postage.



The Marlin Firearms Co.,
Willow Street, NEW HAVEN, CONN



"Too busy fighting Jack Frost to write ads."

THE ROUND CREST ORCHARD HEATER CO.

Manufacturers of the Troutman Orchard Heater, Canon City, Colorado.

THE NEW WEST

Is full of surprises. It is no longer the land of cowboys, coyotes, blanket Indians. Instead of illimitable sagebrush desert, one finds fruit laden orchards, heavy headed grain, green meadows and alfalfa fields. It's the best of God's out-of-doors country—clear skies, pure air, snow clad mountains, waterfalls, odorless pine woods. Read all about it in *The Pacific Monthly*, magazine of the West.

The Pacific Monthly Company, Portland, Oregon.

I am interested in the New West. Send three recent numbers of your magazine, for which I enclose 25 cents.

Name.....

BF Address.....

Cupid Flour

Has same standing in the Flour trade that Hood River Apples have in the Fruit trade.

MADE BY

HOOD RIVER MILLING CO.

S. E. Bartmess

UNDERTAKER AND
LICENSED EMBALMER

For Oregon and Washington

Furniture, Rugs, Carpets
and Building Material

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Electrical Supplies and Fixtures
Scientific Electrical Construction

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The PARIS FAIR

Hood River's largest and best store

DRY GOODS SHOES, CLOTHING

We are offering some extra
specials in our Clothing De-
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Try a pair of American Lady
\$3 and \$3.50 Shoes, or Ameri-
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KNOX HATS

ALFRED BENJAMIN & CO.'S
CLOTHING

DR. JAEGER UNDERWEAR

DR. DEIMEL LINEN MESH
UNDERWEAR

DENT'S and FOWNES' GLOVES

Buffum & Pendleton

311 Morrison St., Portland, Oregon

AN OPINION ON THE NECESSITY OF ORGANIZATION

American Consular Service,
Belfast, Ireland, February 23, 1910.
Editor Better Fruit:

I have read with much pleasure the report of your address to the Y. M. C. A. Apple Growers' Association. I want to congratulate you especially on your conception and understanding of the power, influence and necessity of associations. The thought which you express of a great association for Oregon, Washington and Idaho, it seems to me, ere long will have a practical consummation. The local association, of course, in each district is of immense value, especially in all matters pertaining to selection of varieties, cultivation, packing, handling and so forth, but a larger association is to my mind an absolute necessity for the business end of fruit growing. I am at this time preparing a report of the fruit markets of Europe, which I will forward you on completion, and I hope you will find in it many things of interest and value to the fruit growers of the Northwest. The States of Oregon, Washington and Idaho should have a greater proportion of the markets of Europe, and under proper organization and supervision will be able to secure it. Great Britain and Germany alone import \$15,000,000 worth of apples and pears per annum, and more than nine-tenths of these fall far below the standard of even the second grade Oregon product. These markets are extremely constant and regular, and can easily be secured and held by the Northwest Fruit Growers' Association to a large extent if proper efforts are made. More especially will this be true on

the completion of the Panama canal, when the fruit can be loaded directly into refrigerator steamers at Portland and landed in European markets in first-class condition. I would like to impress upon the minds of the fruit growers of Oregon the opportunity in British markets for selling fall and winter pears. In my report I will deal more minutely with this subject. If a good winter pear of fair size and quality, which will be firm and in good condition for the holiday trade, can be sent into this market, the district furnishing them will make a handsome profit. The dealers are all crying for that kind of stock. There is among the dealers generally a tendency to avoid buying irrigated fruit that comes into this market after the first of January, as the non-irrigated seems to stand the transportation in a much better form. It would be a wise move on the part of those interested in fruit development in the Northwest to form some organization by which a thorough study of the markets of Europe could be made and suggestions provided for planting varieties that will suit these markets. I would not suggest for a moment that all planting should be designed especially for this trade, but unless the quantities fitted to this trade are very large the difficulties of marketing will be greater. If full shiploads can be sent out from Portland to these markets of Europe, say once a week during the shipping season, the profits in the business, the prices secured and the manipulation of the market will be much more satisfactory. If such an organization as you have suggested can be made for the distribution



COLUMBIA RAMS

Make Arid Land Valuable

Cost about \$15.00 per acre of land
irrigated

COLUMBIA RAM CO.

Tenth and Johnson Streets

Portland, Oregon



CUT OF 1910 MODEL

Simplex Self Balancing Link Blade Cream Separators

HAVE YOU SEEN THE 1910 MODEL "SIMPLEX"

Note the solid, heavy frame and the convenient height of both the supply can and the crank.

This machine is the result of years of experimental work and has the best features of the 1909 Separator (the link blade skimming device, which has been tried and proved its worth, as is shown by numerous attempts to imitate, showing that other manufacturers appreciate the skimming qualities of the LINK BLADES, and the self-balancing bowl), together with the new low-down supply can and extra heavy base and the ease of running.

The self-balancing feature has been on the market for about two years and is a perfect success. It does away with the old style mechanically balanced bowl, which had to be sent to the factory to be rebalanced. The ease of running in this machine is not equaled.

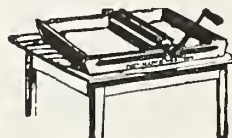
Note the large skimming capacities relative to prices.

| No. | Capacity per Hour | Price |
|-----|-------------------|----------|
| 5 | 500 lbs. | \$ 75.00 |
| 7 | 700 lbs. | 80.00 |
| 9 | 900 lbs. | 90.00 |
| 11 | 1,100 lbs. | 100.00 |

WRITE FOR CATALOGUE TO

MONROE & CRISELL

Everything for the Dairy, Creamery and Cheese Factory
145 FRONT STREET PORTLAND, OREGON



of the fruit it would be wise to establish, in Liverpool at least, a selling agency, with a representative on the ground familiar with all the conditions of the growing, handling and packing of the fruit, as well as being an expert in the line of marketing. Such an agency would be able to do a great work for the fruit growers of the Northwest. I should be very much pleased to hear from you personally, and with suggestions from you as to what I might be able to do in this part of the world to assist the fruit interests of the North Pacific Coast.

Very truly yours,
Henry B. Miller, Consul.

◆ ◆ ◆

LANDSCAPE GARDENING AS A FINE ART.
The landscape gardener needs more of a training than the artist, as the artist only paints the

picture he sees before him, while the landscape gardener has to produce the picture. The artist only takes one view and then hides the defects of the view and brings out the strong points, while the landscape gardener must consider all points of view, said Professor C. I. Lewis of Corvallis, Oregon. Continuing, he spoke of the great need of young men in the profession and the tendency there was of young men congregating in cities and working and slaving for others with no hope of making more than from fifteen to twenty dollars per week, when the country so badly needed young men with the necessary training to take up the work of preserving the natural features of the country. The speaker said landscape gardening was not, as many people seemed to consider it, merely the collection of a lot of different specimens, cocklesheils, etc., which were planted and

scattered here and there, making no impression on the mind in the way of a picture, but merely calling attention to the different specimens. Real landscape gardening was the preserving of natural features, grouping of trees and plants to the best advantage, bringing out the lights and shadows as an artist would to make a complete picture and so as to bring some beautiful feature into prominence. The true landscape gardener would have to be a lover of the beautiful, and in order to bring out the best he would have to travel; he could never travel too much, and he would have to be able to see the beauty in nature. Even in traveling over the dry wastes of the sagebrush regions he would be able to see the beauty in the soft grays and browns and blue and the wonderful sunsets. When a man is thinking of building a house and laying out the grounds he should call the landscape gardener first and the architect afterward. The opposite is most always done, and that is why we have so many monstrosities like a Queen Anne house with a Japanese garden, etc. Landscape gardeners have every advantage on the Pacific Coast, as they have many different materials to work with. They can bring into use so many different varieties and colors to get just the right effects of light and shade that are needed. We can grow all the trees and plants in this section that grow in the temperate zone and many that grow in the semi-tropic, and can bring trees from the East and from Japan. Landscape gardening should be used in connection with the laying out of a garden of the humble home as well as in laying out the grounds of some large park or estate. More mistakes are apt to be made in laying out the home grounds, as the average man thinks that if he picks out all the queer and odd plants, weeping trees, Japanese oddities from the nursery catalogue and then plants them here and there that he has the correct thing, and the result of such selection and planting is that the home is ugly instead of beautiful, as it could be made by right selection and correct planting. A young man wishing to take up the study of landscape gardening should study at different technical schools, learn civil engineering, study history of landscape gardening, work in different nurseries in spare time, and should serve as an apprentice to some master in the trade for his board, until proficient, which would be better than slaving his life away at fifteen dollars a week as a hireling. A true landscape artist of ability can command position and make his own price.

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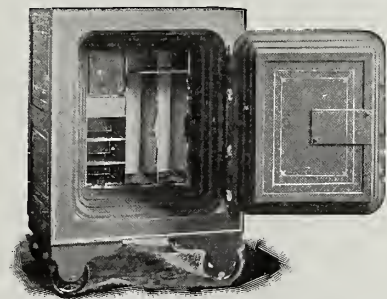
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PAINTING AND PAINTS.—The success of the average American farmer today is due largely to the fact that in running his farm he endeavors not only to produce as much as possible but keeps his weather eye open on the question of cost of operation. By carefully watching expenses he is able to make larger net profits. There is one important factor in expense, however, which has not received the notice that it should from the average farmer of today. This is the use of paint for preserving farm buildings, implements, tools, fences, etc., in perfect condition with a coat or two of paint at regular intervals. If he would only stop and consider that by painting he can prolong the life of all of his farm necessities and that this means less yearly expense and larger net profits, a revolutionary movement along these lines would soon set in. Paint does three important things for the farmer who uses it. First, it improves the appearance of the farm buildings, giving the whole farm a "prosperous look." This in itself enhances the value of the farm. Second, it enables the farmer to get the largest amount of work out of his machinery, implements, etc., for the longest space of time and for the smallest average annual wear and tear. Third, it decreases the farmer's net annual outlay for expenses, as it distributes the cost of renewals over a much longer period of time than if the machinery, etc., is permitted to go on year after year without any protection until it is entirely worn out. The cost of

lumber also plays an important part in the question of painting and net profits. The farmer who allows his barn to go from year to year without a new coat of paint is simply laying up heavy expenditures for himself. Lumber is today fully twice as expensive as it was a decade ago, so that the farmer whose unpainted barn is beginning to feel the effects of the ravages of the weather will have to pay just that much more for lumber than he did when he put his barn up a number of years ago. Paint is a great wood preservative, as the oil sinks into the pores of the wood and prevents the dampness from getting in and causing decay. If a barn is painted at regular intervals of about two or three years the lumber will last fully twice as long as on one that is not painted at all. All of these facts only go to show that the up-to-date farmer who is far sighted enough to protect his farm necessities by a coat of paint at given intervals will eventually have larger net profits on his crops, as his average expenditures for wear and tear will be considerably smaller than those of the man who simply "lets things slide." When a farmer has once decided that painting is an economical factor in the results to be obtained from his farm, it is very important that he should choose the right paint for the work at hand. In paints, as in all other commodities, there is always the best, second best, and worthless imitations where quality is sacrificed for "price." The best costs at most only a few cents more than the inferior product and contains better raw materials, better methods of manufacture and the greater care and experience of the maker. This makes

the difference in cost practically nothing; the difference in appearance, covering capacity and durability, everything. There is an axiom in the paint business, "The lower the price, the higher the cost of the job." The difference in cost of high quality and inferior goods always proves that the best goods are in reality the most economical. The farmer may well remember this in buying his paint for the farm.



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ROSE SLUG.—The rose slug has become a serious menace to cultivated roses in many places. The insect is double brooded, but it is a comparatively easy pest to keep under control. The adult is a black fly about as large as the ordinary house fly. Early in June eggs are deposited within the tissue of the leaves and the little slugs hatch from them and eat the green tissue off the upper surface of the leaves. When these slugs mature they descend to the ground and pass the pupa stage in silken cocoons which the slugs spin about themselves. About two weeks later the second brood of flies appears and deposits eggs, as in the case of the spring brood, and again the rosebushes are defoliated. The best remedy to use against this insect is white hellebore, which may be lightly dusted over the foliage from a small cheesecloth sack, preferably towards evening; or the hellebore may be put into water in the propor-

tion of one ounce to three gallons and then the foliage is treated by sprinkling or spraying this poisoned water over the bushes. There need be no fear in using this poison quite freely for the destruction of the slugs, as it loses its poisonous properties quite rapidly when it is exposed to the air, and it requires a considerable quantity of it to produce poisonous effects upon man.—C. P. Gillette, Colorado Agricultural College.

◆ ◆ ◆
ROSE SHOWER IS PLAN.—There will be a "shower of roses" on the streets of Portland at the next Rose Festival such as the people have never before seen. This is the plan of the Peninsula Rose Association. It was partly carried out last year, but this year the distribution of roses will be much more elaborate. The association will also conduct a rose booth at the Union Depot

from which roses will be given to every visitor. A committee headed by Mr. J. H. Nolte held a conference with the officers of the Rose Festival Association recently, when it was agreed that the Peninsula organization should have charge of these two features. Mr. Nolte says that fully 25,000 choice rosebushes were set out about the homes on the Peninsula in 1909 and these will be ready to draw from, in addition to the old supply. The club's plan means that a train of electric cars will be run through the main streets of Portland, on both sides of the river, distributing roses from the Peninsula.

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SHRUBS IN ENDLESS VARIETY.—Western Oregon is noted for its equable climate. On this account many shrubs will grow well here that will not grow even in more southerly parts of the United States. On this account it is a very attractive field in which to grow ornamental shrubbery. The attention of all the people of Portland, says A. King Wilson, writing in the Oregonian, should at this time be attracted to the fact that our city could be made more beautiful than it is at present if each person would do his part. We are employing landscape gardeners to come here from the East and make suggestions in regard to the laying out of our city, looking toward improvements, to make it more beautiful and attractive. At this time each citizen should do all in his power to help on the good cause. A great many people own

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Those who buy cheap twine will certainly have trouble—delays due to tangles, knots and breaks will mean the loss of valuable time—and every delay at harvest time will cut down your profits.

There is a sure way to avoid this. Let the experience of the past be your guide in purchasing your twine. The verdict of the majority of the farmers of this country is a safe guide. Their decision should have more weight with you than the statement of any twine manufacturer. These farmers know. They have the same problems confronting them that you have. They have no axe to grind. They do not sell twine. They are only interested in results.

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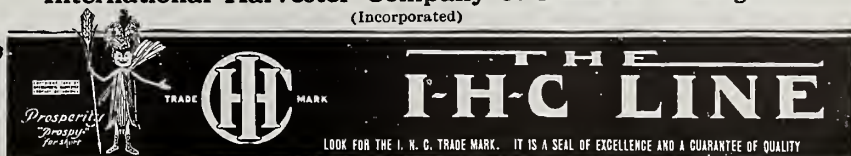
Are the twines used by the majority of the farmers of this country. They have been proved to give the best results. Eighty-five to 90 per cent of the farmers use Sisal. It is smooth running and works at steady tension without kinking or tangling in the twine box—insuring perfect binding and perfect tying. Its only equal is the really high grade Manila twines such as bear the I H C trade-mark.

Your interests and ours are identical on this twine proposition. We have more at stake than selling twine. We are vitally interested in the successful operation of hundreds of thousands of binders. On their successful operation depends our success—and we know they cannot operate successfully with poor twine. No binder made can. For this reason we have given the twine problem careful study. When we say "Stick to Sisal or high grade Manila bearing the I H C trade-mark"—we do so because we know them to be the highest standard of excellence in binder twine.

But we don't ask you to do as we say. We want you to be the judge. But your judgment to be right should be based on facts—not on the statement of any twine man. And the fact is—that the majority of the farmers of this country use I H C twine. Sisal or Standard (which is made from pure Sisal) comes 500 feet to the pound; high grade Manila, 600 feet to the pound; Pure Manila, 650 feet. See your local I H C dealer at once and let him know how much you will need. If you want more facts on binder twine, write the International Harvester Company of America at nearest branch house for information.

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vacant lots in the suburbs of the city. Some of these lots even have stumps on them still. I would suggest that these stumps be covered with English ivy, on account of the fact that where it is usually desired to grow ivy the soil is not particularly fertile or has not been cultivated. I would suggest that slips be planted in the garden, either the flower or vegetable garden, where they can be watered, for one season, and they can then be transplanted to the place they are desired to be grown. In a year or two English ivy will cover stumps, fences or other objectionable objects of the landscape. If it is put out from cuttings it is a little slow to start, but after it is well rooted it grows rapidly and is very attractive during the winter. The English holly grows very well in this climate. Small bushes can be purchased at a very reasonable price, and they should be planted everywhere. They require little attention after the first year or two. Persons who desire to have berry-bearing holly, to be certain of it should buy the plants that have the berries on them. Otherwise they should buy plants that have been taken from a holly that produces berries each year. They should not be planted alone, but several bushes should be together. Persons who can stand the expense and desire to have a beautiful effect quickly should buy one large holly and then plant

smaller ones around it. This makes a very pretty cluster. The hawthorn does very well in this climate. It is used in England for hedges and is white, and grows luxuriantly here. There are some very pretty hedges of it around Portland. I prefer the red hawthorn, which has a very gorgeous color and is attractive from a distance. The Oregon grape is very pretty and is grown almost exclusively for its leaves. And what is known as the wild currant is one of the first flowers to bloom in Oregon. Whenever you find the wild currant in bloom you may look for the humming bird. It is very easily grown in the yard and is of a very brilliant pink color. To these should be added the lilac and the purple fringe. I would suggest that people plant for a hedge to make a screen or guard Hall's evergreen honeysuckle. This honeysuckle stays green nearly the entire year. And the clematis of the various varieties are very beautiful climbers in this country. Persons who desire a tree that will grow quickly, of the deciduous variety, should plant what is called the black locust. This tree I have found to be the most rapid grower that I have ever planted. Some may object to its litter in the fall, but it has a beautiful bloom and I regard it as a very pretty tree. The Oregon maple is a rapid grower here, is an attractive tree and easily transplanted.

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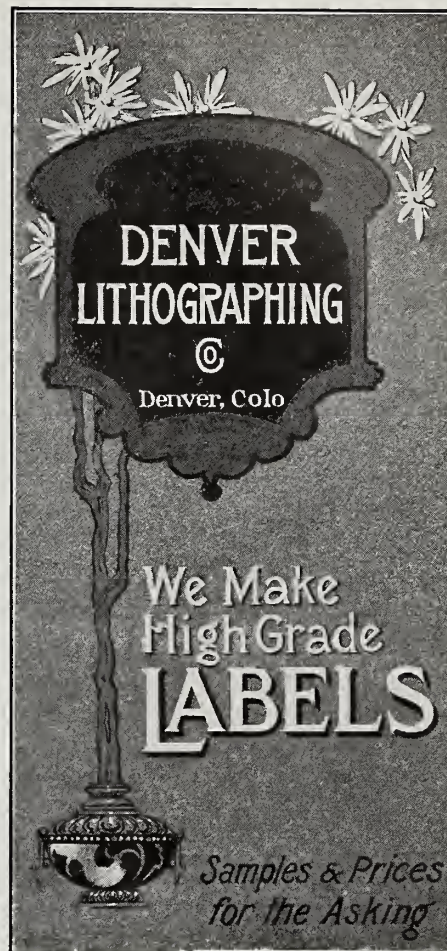
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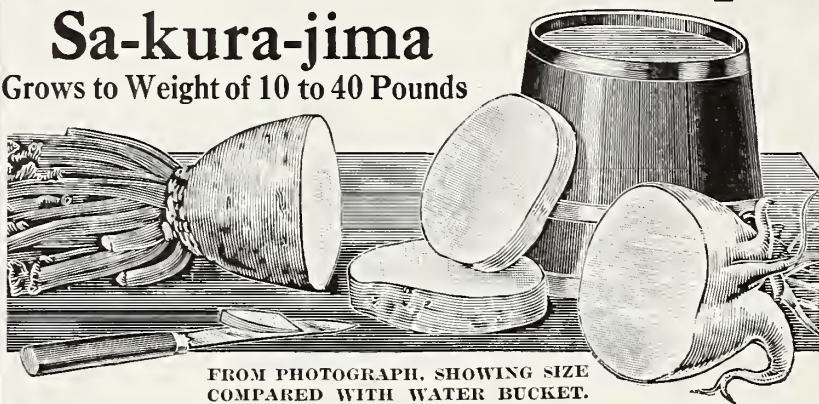
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Giant Radish from Japan

Sa-kura-jima

Grows to Weight of 10 to 40 Pounds



FROM PHOTOGRAPH, SHOWING SIZE COMPARED WITH WATER BUCKET.

Has Been Grown 1½ feet Long and 10 in. Diameter

This Giant Radish is a distinct novelty, in fact the greatest novelty of its kind ever introduced in America. The Fruit-Grower could hardly believe the stories told about this wonderful radish, so we sent out seeds for testing to our subscribers last year. We are "from Missouri," but we were certainly "shown" by our readers, for they grew radishes weighing all the way from 10 to 42 pounds. The story of the growing of these Giants is told in February, our Gardening Number. Sample copies sent on request.

What do you think of a radish which grows to weigh 10 to 42 pounds, which is often a foot and a half long and 10 inches through; which is as tender and sweet during hottest July weather as earliest spring radishes; meat crystal white, solid, texture like a fine apple, and never becomes hot or pithy; which can be eaten raw like an apple, cooked like turnips, and pulled late in the fall, keeps all winter as sweet and crisp as when pulled. The tops, which grow 2 to 3 feet long, cooked as "greens," are to be preferred to spinach and mustard.

This describes the Giant Radish from

SEEDS FREE with a Trial Subscription to The Fruit-Grower

Appreciating the great value of this new radish, The Fruit-Grower has purchased practically all of the seeds of this variety in the United States to be distributed free to new subscribers. We canvassed the entire country, and it would not be possible to secure more seeds, even from Japan.

The seed is not for sale at any price, but we will mail a trial packet free to every one who sends 50c, coin or stamps, for a year's trial subscription to The Fruit-Grower. Regular rate \$1.00, but we offer it to you at half price, to get you interested, and convince you that we have the best paper of the kind in existence.

Send for a free copy of February, annual

THE FRUIT-GROWER, Box R-703, St. Joseph, Missouri

Japan, "Sakurajima," introduced in America several years ago by the U. S. Dept. of Agriculture, and has proved of great value here. Among the first places tested was at the Long Island Experiment Station, and The Fruit-Grower received a "tip" as to its value from Director Fullerton.

Planted late, it will extend the radish season through the entire summer, being at its best in hottest weather. Seeds planted to mature in late autumn will keep nearly all winter, almost until radishes come again.

Hon. Wm. J. Bryan, hearing we had this seed, wrote: "I saw the giant radish during my tour of Japan and have been intending to send there for seed. The flavor is good. I will buy seeds of you or subscribe for your paper—in fact, you can trade with me on your own terms."

Mr. Bryan is a Fruit-Grower subscriber.

Director Fullerton writes that during 1909 he grew one of these radishes which weighed forty-two pounds, and that he expects during the present season to break all records by growing one which will weigh 50 lbs. Read his article in The Fruit-Grower.

Gardening issue, handsomely illustrated, 84 pages, and read how our folks grew the big radishes; leading fruit paper of America. Many of our 100,000 readers write that a single number is worth the price of a whole year's subscription. Ask the editor of this paper about The Fruit-Grower. He will recommend it, and he knows that we could not afford to make this offer unless The Fruit-Grower would "make good," and that Sakurajima Radish had been fully tested and all we claim for it. Liberal cash prizes for largest radishes grown. Send 50c at our risk for a year's trial subscription, and seeds will be sent by return mail, FREE. Write at once, before supply is exhausted.

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There is more doing in the West today in the way of progress and development than in any other section of the United States. If you are interested and want further information about opportunities and resources of a vast new empire, use the coupon.

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BEAUTIFYING PARKS AND BOULEVARDS.
The amendment to the city charter of Seattle providing for the creation of the board of park commissioners with their present powers was passed in 1904, and it has been since that date that practically all of the work of the park department has been done, said Edward C. Cheasty of Seattle, Washington. The board of park commissioners consists of five members appointed for terms of five years, one appointment being made each year. Appointments are made by the mayor, subject to being confirmed by the city council. The board has exclusive control and management of all matters pertaining to the park department, except in the ordinance approving purchases of real estate and also authorize by ordinance the condemnation of any property desired for park purposes. In all other respects the board has the exclusive and final control of all of its own affairs. The park commissioners serve without salary. It is a labor of love, and speaking on behalf of the present board I think I may safely say that each and every member is devoting to the work of this department the very best energy and thought of which he is capable. The following facts will give some idea of the general scope of the work, properties owned by the department, the expenditures, etc. That considerable attention is being paid by the board to the requirements of the children of the community is attested by the fact that we have now in operation and in process of acquisition twelve tracts of land of various sizes to be devoted exclusively to the purpose of playgrounds for the children. These sites have been selected with great care, with the view of serving as nearly as possible

all sections of the city. These playgrounds are being gradually brought into use, apparatus of various kinds provided, and in several instances a man or woman superintendent appointed to have charge of the grounds during the hours when they are frequented by the children. The area of Seattle is twelve miles from north to south and from two and a half to four miles from east to west, and comprises an area of fifty-two square miles of land and thirty-five square miles of water. From a geographical standpoint Seattle is most interesting, having the waters of Elliott Bay on the west, Lake Washington on the east, the system of rivers at the south, and comprising within its area all of

Lake Union and Green Lake. To the boulevard system of Seattle we have devoted long and careful consideration and I desire to call your attention to the proposed route. It will be seen from this description I have given that the contemplated boulevard system will cover practically every district of the city. It will be possible to drive over a continuous boulevard from the extreme north portion of the city to the limits upon the east, upon the south and upon the west. Every park in the city will be accessible by way of the boulevard. This system contemplates the building of more than fifty miles of roadway. Its possibilities from the standpoint of beautifying are absolutely unlim-

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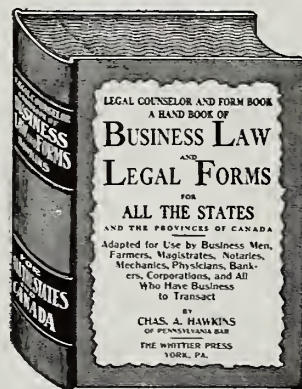
Railway men say the colonist movement westward in 1910 will be unprecedented. Thousands are harkening to the call and fortunes are being made now by the early arrivals. New railroads are opening up vast, almost limitless new territory. Let us tell you about it. Send 25 cents in stamps for information.

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ited. The natural geography of the land, its surroundings from a standpoint of salt water, lakes, rivers, mountains and forests all combine to give an opportunity unexcelled. It has been my fortune to travel in many lands and to see many of the beauty spots of the world, and I have driven upon the most famous boulevards of Paris, Berlin, Vienna and Rome, but I do not hesitate to say that in my opinion, when the plans which are now being worked out by the park department of Seattle shall have become a reality, as they will in the next twenty years, that this will be the most beautiful city in the world.

THE Oregon Nursery Company reports having just completed their first year's shipment from their new plant at Orenco, Oregon, which is located seventeen miles west of Portland on the Oregon Electric Railway and contains some of the very finest land to be found in the Willamette Valley. This company claims to have done the

largest business the past year in its history, and judging from the writer's observations it was no small amount. A better idea as to the volume and extent of their business can be grasped when it is known that they have been shipping stock almost daily from the middle of last October to the close of March and that some days as many as four big carloads of trees were shipped, covering territory from the Atlantic to the Pacific and from Florida to the cold northern sections of British Columbia. It would undoubtedly be conducive to a great increase in business to this company if the prospective fruit tree buyer could but go through their great packing sheds, covering two acres, and see the thoroughness with which all departments are handled and the methods employed to prevent errors. Mr. M. McDonald, president of the company, says he anticipates a greater demand for first-class trees for next season's planting than has existed the year just closed.

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A genuine bona fide offer. Read our proposition? Are you a smart speller? We will give \$100 in gold and other prizes named below to those able to make the largest list of words from the words THE ROUNDTREE PUBLISHING COMPANY. You can make at least twenty, we believe, and if your list is the largest you will get the greatest prize. In case of a tie, prizes will be divided between highest contestants. Here are the rules to follow: Use only words in English language Words alike, but with different meanings, can be used but once. Use any dictionary. Pronouns, nouns, verbs, adverbs, suffixes, adjectives, proper nouns, allowed. Anything that is a legitimate word will be allowed. This is the way: Heart, temple, rain, only. Use these words and arrange alphabetically. The following is a list of the prizes:

\$25.00 for the largest list of words as above.
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We want you to know THE DIXIE HOME, which is one of the brightest and best illustrated magazines in the world, and it is for this reason that we offer these premiums. We make no extra charge for the privilege of entering this word-building contest. To enter the contest it is necessary for you to send us 50 cents for subscription to The Dixie Home for one year, with your list of words. List should be sent at once. The lucky ones' names will be published later. This is a great offer to those that take an interest in such contests. Address "CONTEST EDITOR," DIXIE HOME, Department 50, Birmingham, Alabama.

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GOOD CABBAGE SEEDS

ALTHOUGH very little stir is made of it in the press and the subject is very little understood by the public, it is a fact that Puget Sound seed growers produce a majority of the cabbage seed used by the farmers and gardeners of America.

Most of this seed is grown by the Chas. H. Lilly Co. of Seattle on the famous LaConner or Swinomish flats in Skagit County, and this concern is very largely the source of supply for the entire country in the matter of cabbage seed.

The leading standard varieties of cabbage seeds grown by the Chas. H. Lilly Co. include the following: Early varieties—Early Winningstadt, Charleston Wakefield, Early Jersey Wakefield, Extra Early York. Second early or summer varieties—Early Spring, Lilly's Glory, Early All-Head, Henderson's Early Summer. Early Flat Dutch, Large Late Drumhead, Fottler's Brunswick, All Seasons. Winter varieties—Danish Ballhead, Surehead, Premium Late Flat Dutch, Red Dutch, Drumhead Savoy and Autumn King.

From the beginning of the industry here the decided superiority of Puget Sound cabbage seed over that grown anywhere else was so marked and was so quickly and generally recognized that a general and permanent market was very soon established.

In fact, all Puget Sound seeds of such crops as peas, turnips, beets, vetches, beans, radishes, carrots, etc., are of the very highest grade of maturity, vitality and full development. It is difficult to explain just why this is so, but it is due to an ideal combination of climate and soil for just that kind of vegetation. It is not true of some other plants, such as some of the flower annuals, for instance, the seeds of which, when grown here for several successive seasons, produce a luxuriant increase of plant, vine or foliage growth, without corresponding increase of the flowers, and the Lilly Company find it necessary to go to California or France for the finest stocks of flower seeds.

One of the most important elements of superiority of the Puget Sound product over that of the only other cabbage seed district in the United States, Long Island, New York, where a limited area is cultivated by cabbage seed growers, is that the Puget Sound seed is uniformly large in size, fully matured and charged with the highest degree of productive vitality.

As a matter of practical demonstration it has been concluded that on an average fully 95 per cent of the Puget Sound cabbage seeds develop perfect plants, while not more than 80 out of 100 of the Eastern seeds will ordinarily grow.

Another decided advantage enjoyed by the Puget Sound growers of seeds over those of the Atlantic

Coast is the fact that the soil of the Puget Sound seed region is so rich and indestructibly deep that no fertilizer or other artificial stimulant is necessary.

One of the important phases of the industry is the care required and the necessary expense involved in keeping the seeds absolutely true to name, and this has been accomplished so well in the Lilly gardens that it is now reduced to a matter of exact certainty. Not more than one variety of cabbage seed is grown on any one farm, and these not within fertilizing distance of one another.

When grown for seed the seeds are planted in May or June, then the young plants are set out in July. In October, after heads are matured, the

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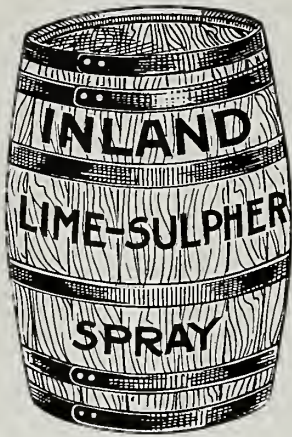
Mr. Fruit Grower, you have only to use REX Lime and Sulphur Solution once to use it always. All **experts** will tell you what REX will do; those who don't know—their say-so isn't worth having.

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imperfect heads are culled out and the remainder are covered for the winter. In the spring the plants are set in rows six feet apart, with stakes four feet high and about eight feet apart in the rows. As the flower stalks grow they are held up off the ground with binding twine run from stake to stake the length of the row. This permits of perfect cultivation all through the season, thus keeping the fields free from weeds and also furnishing the plants with sufficient moisture to fully develop the seed pod. This is probably one of the greatest reasons why seed grown on Puget Sound is superior to Eastern seed, where the flower stalks are allowed to fall all over the ground and cultivation must cease after the first few weeks of growing weather. Another great advantage of the Puget Sound country is that the plants are covered in the row where they are to produce the seed, and do not have to be moved in the spring, while on Long Island the winters are so very severe that it is absolutely necessary to put the heads in pits and cover them deeply. Then they have to be again set out in the spring, and if it happens to be a wet spring the heads begin to throw out flower stalks before they can be moved. These, of course, are mostly broken off in setting out the plants and in this way the plant receives a check or setback from which it suffers seriously.

In June of the second year the field is in full flower, resembling a huge piece of bread and butter. The stalks are cut in August of the second year and the seed is threshed out with flails on large squares of canvas right in the fields.

The peculiar diversity of soil and climate in the State of Washington makes seed growing of a large variety of seeds practicable. It is a well-known fact to all horticulturists that the different plants require different soil and different climate to produce perfect or even approximately perfect specimens. In the State of Washington this diversity of soil and climate is found to probably a greater extent than anywhere else in the world, and the Chas. H. Lilly Co. are now devoting each year larger acreage to seed growing, having several hundred acres in vegetable seed, and also handling each year a great many carloads of red clover, alsike, timothy, vetches, onion sets and alfalfa seed produced in Washington, Oregon and Idaho. These field seeds, wherever they originate, are all shipped to the big warehouse and cleaning plant located at Seattle, carefully recleaned, sacked and tested for purity and germination. As an additional check and precaution, samples of the seed after being recleaned are submitted to the Department of Agriculture for their test as to purity and germination.

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Everything for Furnishing

Stewart Hardware & Furniture Co.

22,000 feet floor space Hood River, Oregon

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DESTROYS ALL LEAF EATING INSECTS

Extensively used in the Northwest
Sticks to the foliage and will not burn

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HOOD RIVER APPLE GROWERS' UNION, HOOD RIVER, OREGON

And in all other consuming districts

Write above or write our St. Paul office for name of nearest distributor. We have been making chemicals for over seventy-five years. Insist on Grasselli Brand and get the benefit of this long experience by increased value of crops

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THREE THINGS THE SPRING GARDENER
Should Observe.—Resolve to have a better garden this year—better fruit, better flowers, better vegetables. This does not always mean a larger garden; sometimes it is better to reduce the size of the old garden one-half. A good maxim is, "Plant no more than you can fertilize and thoroughly care for." Make a careful study of the three important garden requirements—fertilizing, spraying and best variety. Plan your garden and make a diagram on paper, drawn to scale, before placing your spring order. As soon as the soil is in good condition, work in the previously applied fertilizer and cultivate thoroughly. Much harm can be done to garden soil by digging and trying to work it while in a wet and heavy condition, writes E. J. Ladd in the Portland Oregonian. More time is lost than gained by so doing, often resulting in poor crop, if not complete failure. Soil that readily crumbles and does not stick to tools is in good working condition. In marking off your garden use a line or board long enough for each row. Nothing adds so much to the looks of a garden as straight rows. For early vegetables, you can plant now: Peas (the smooth kinds are harder than the wrinkled varieties), onions (either sets for early or seed for later use), radishes, lettuce, beets and turnips. Follow planting of radishes and lettuce about two or three weeks apart for succession. It is astonishing the amount of fresh vegetables that can be grown in a small space. The rich spaces between our

famous roses can be utilized in growing crisp and sweet radishes and lettuce, pulling the unused lot out by the time roses are blooming. Every garden, no matter how small, can be made to produce fruit. Strawberries can be planted now, and if properly cared for should yield at least one quart to each plant. Choose a variety that is doing well in your locality. Let those with more room than you have experiment with the new and costly varieties. Plants cost from two to four cents each. In planting, use a line, and by intensive culture you can plant closer than those who grow in fields. Set plants no deeper than they grew before transplanting. If roots are very long, shorten; plant sixteen inches apart in row. If rows are double, alternate plants. If properly set, no check will be observed. Keep clean, runners cut off, and the second year each plant should yield at least one quart of delicious berries. Raspberries and blackberries can be planted close to a fence. Loganberries and those requiring support must be planted with this object in view. From one planting of loganberries the writer has picked



A SUBSTITUTE
For Bordeaux Mixture
10-gal. keg making 1,500 gals. Spray; delivered at any R. R. station in the United States for \$12.50. Prompt shipments. Write to day for full information.
B. G. PRATT CO., Manufacturing Chemists,
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"LION BRAND"
TRADE MARK
Spraying Materials

LION BRAND
Is the stamp of purity, strength and uniformity in insecticides
We make more insecticides than any other manufacturer in the United States, and Blanchard's "LION BRAND" is the standard on four continents.

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LION BRAND BORDEAUX MIXTURE
Made by us for over twenty years, and guaranteed to contain nothing but the purest and most effective ingredients. One gallon to forty-nine of water.


BLANCHARD'S
LION BRAND PARIS GREEN
We are the only independent makers of Paris Green. Lion Brand is sold in every state in the Union. There's a reason—Lion Brand is pure and strong, contains not a particle of filler or adulterant, nothing but purest Paris Green.

BLANCHARD'S
LION BRAND ARSENATE OF LEAD
Unequaled by any, anywhere, at any price. The Lion Brand is backed for purity and strength by our manufacturing reputation of nearly a quarter of a century.

LION BRAND
Insecticides are on sale in every state. If you cannot get them handily, write directly to us and we will see that you do. Send for

Blanchard's Spraying Booklet
It is free to any one who is interested and contains much valuable information for the fruit grower and trucker.

The James A. Blanchard Co.
631 Hudson Terminal Building
New York City, New York
PORTLAND SEED CO.
Local Agents **PORTLAND, OREGON**



RHODES DOUBLE CUT PRUNING SHEAR
Pat'd June 2, 1903.
RHODES MFG. CO.,
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Dept. W

THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders. Write for circular and prices.

Spray The I H C Way For Best Results

Use The Engine For Other Work

YOU are entitled to full crops. Don't let insect pests and plant diseases eat away your profits. A Famous spraying outfit saves what you have been losing. It sprays all solutions more thoroughly, more rapidly—at less expense and with less labor than any other outfit you could buy. Thousands of farmers, fruit growers and gardeners depend on a Famous, for they know what is best. Many who have been discouraged with other outfits are having the greatest success with a Famous outfit. There is

An I H C Outfit To Meet Your Needs

—no matter how little or how much spraying you will do—and you can easily detach the engine to use for any other power work you have on hand. Your I H C outfit is a money maker every day in the year. We furnish blue prints so you can build your own spray wagon, tank, etc. Let us send you our interesting and valuable spraying book, with complete spraying guide. Or get a copy from the local International dealer. Let him tell you about the Famous Spraying outfit you want, or write International Harvester Company of America at nearest branch house.

WESTERN BRANCH HOUSES:
Denver, Col.; Helena, Mont.; Portland, Ore.; Spokane, Wash.; Salt Lake City, Utah; San Francisco, Cal.



INTERNATIONAL HARVESTER COMPANY OF AMERICA
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CHICAGO U S A



THE I-H-C LINE
LOOK FOR THE I. H. C. TRADE MARK. IT IS A SEAL OF EXCELLENCE AND A GUARANTEE OF QUALITY

IF YOU WANT TO KNOW MORE ABOUT THE WEST,
Resources, opportunities, life, literature, etc., don't delay, but send the coupon at once. The West of today will astonish you. There is something doing in the empire beyond the Rocky Mountains that will interest you. Get in touch with a live land, where fortunes await the willing.

The Pacific Monthly Company,
Portland, Oregon.
Enclosed find 25 cents. Please send three recent numbers containing information about the West.

Name _____
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THE WATERLOO GASOLINE ENGINE *Is the Steady Service Engine*

Eliminates usual gasoline engine troubles. Write for complete descriptive catalogue, which explains in detail the many superior features.

2-horsepower - - \$ 90.00

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Write us about your machinery
and pump requirements

Pipe Pumps Windmills
Gasoline Engines Launches

Well Drilling Outfits

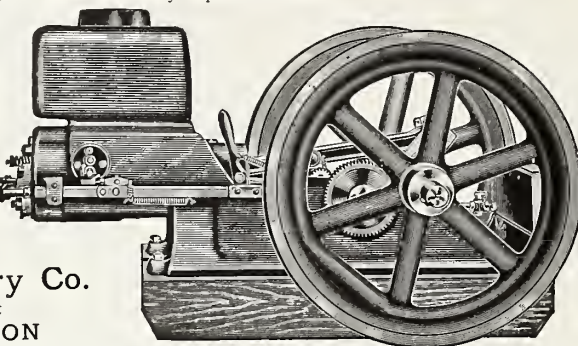
Hydraulic Rams Fittings Belting

Saw Mill Machinery

Reierson Machinery Co.

182-4-6 Morrison Street

PORTLAND, OREGON



twenty-five pounds of ripe fruit. Gooseberries and currants require but little space, and will repay trouble and care. Rhubarb does well in rich garden soil. These small fruits are so readily and easily produced that all may enjoy fresh fruit from their own gardens if they will. Of course the flower bulbs were planted long ago and are now showing through the ground. Though late, you can yet plant with fair degree of success. Sweet peas give more and better flowers for the money invested than any other flower. Plant now, trench deep, and as the tops grow draw the earth up to the tops. This buries the roots deep and cool, a condition much desired. Divide and plant perennials. If crowded for room give the neighbors some. Pansies are among the best of early flowering plants. Forget-me-nots and lilies of the valley are all low growing and deliciously sweet. So much real satisfaction and pleasure can be gotten out of a garden, no matter how small, that it is a wonder more people do not enter into the enjoyment of it, as a pursuit healthful and instructive, to say nothing of the profitable features.

♦ ♦ ♦
STARK YEARBOOK.—Captain J. H. Shawhan, Idaho's most successful pear grower, says of the Stark Yearbook for 1910: It is certainly a beauty, and is the nicest one I have ever had the pleasure of examining. The information contained in it relative to planting and caring for an orchard could not be more complete. The man who plants an orchard and follows the instructions given in it will make no mistake. I consider the book very valuable and every orchardist should have one.

Spraying Outfit? Here's a REAL BARGAIN!

Besides Furnishing Power for Spraying, This Mighty Engine Does a Hundred Other Tasks!

Here's a combination power-spraying outfit and **PORTABLE POWER PLANT**—at the price of the usual power-spraying outfit alone!

No need to pay **BIG** money for a power-spraying outfit since the versatile **Fuller & Johnson Farm Pump Engine** is on the market!

At insignificant cost get the Fuller & Johnson Spraying Outfit—highest grade manufactured, and guaranteed to give satisfaction—a characteristic product of the F. & J. Mfg. Co.

FULLER & JOHNSON SPRAYING OUTFIT

Dodge the Heavy Outlay of Money for Spraying!

Every grower of fruit—every truck farmer—every farmer of any kind must have an engine to do the heavy work! But where's the sense in buying two kinds of power plants when the **Fuller & Johnson Spraying Outfit** includes a **PORTABLE** power plant that does the work of both? Spraying is necessary—but it takes only a few days each season. So the thing to

do is to avoid the heavy investment. And the Fuller & Johnson Outfit, with its mighty little engine that works at other tasks besides, is the solution!

Runs 6 to 16 Nozzles

This spraying outfit keeps a pressure 140 to 200 pounds—ample for every need—powerful enough to run from 6 to 16 nozzles.

Just set it into a wagon box or truck and put it to work.

Read Combination Offer

Write today for name of nearest dealer and get this bargain—a combination power-spraying outfit and **Portable Power Plant**—at the price of the usual spraying outfit!

If you already have a Farm Pump Engine we can supply you with our matchless spraying outfit, to which you can quickly hitch the engine. If today you have a spraying outfit our engine will run it for you! Easy to attach it.

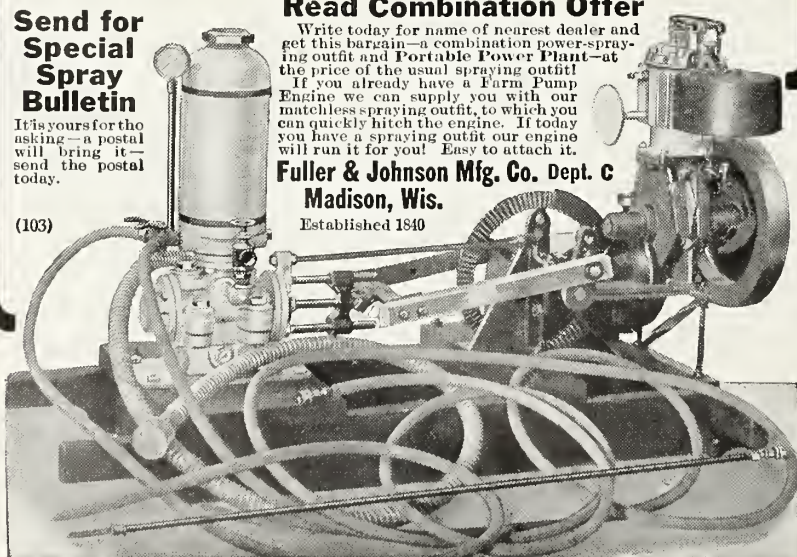
Fuller & Johnson Mfg. Co. Dept. C
Madison, Wis.

Established 1840

Send for Special Spray Bulletin

It is yours for the asking—a postal will bring it—send the postal today.

(103)



ORCHARDIST SUPPLY HOUSE

**FRANZ
HARDWARE CO.**

Hood River, Oregon

HEADQUARTERS FOR CENTURY SPRAY PUMPS

Hose, Nozzles, First-class Plumbing Supplies

C. F. SUMNER

Successor to Norton & Smith

HOOD RIVER, OREGON

WHEN ARE YOU COMING WEST?

Fortunes are being made now by hundreds on small fruit ranches in the West. If you are interested in the famous fruit section about Hood River, Ashland, Medford and other equally famous sections, send in the attached coupon. It's the soil, climate, and scientific culture that makes Oregon and Washington apples famous.

The Pacific Monthly Company,
Portland, Oregon.

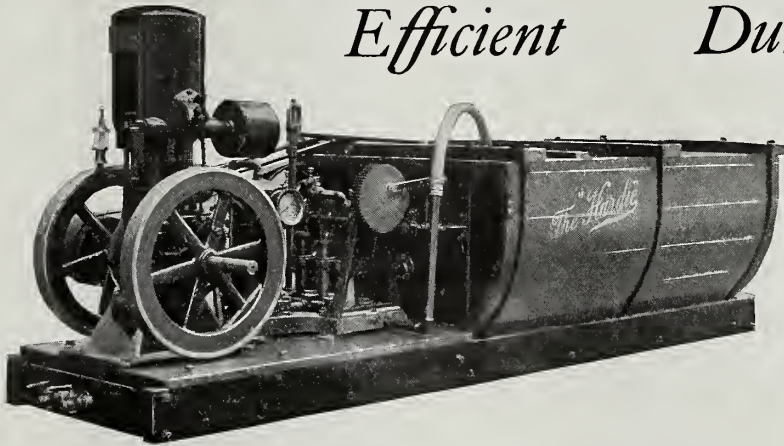
Enclosed is 25 cents, for which please send me three recent numbers about famous fruit sections of the West.

Name.....

BF Address.....

The Hardie Triplex Sprayer

Efficient Durable Simple



**NOTHING
TO WATCH
BUT THE
SPRAY**

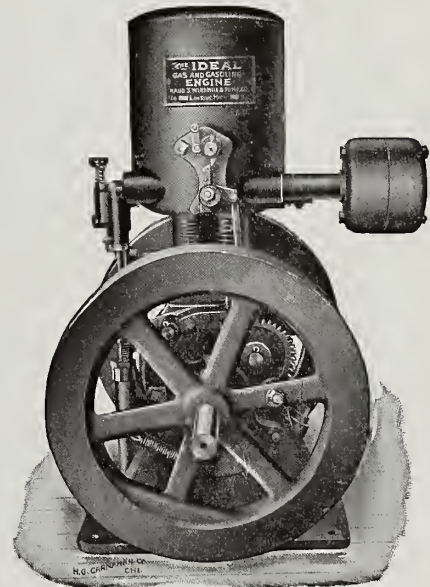
OUR 1910 model Triplex will suit you; will suit you in efficiency, in simplicity, in pressure, in capacity and in general makeup. Our TRIPLEX PUMP gives you an even continuous pressure, be it high or low, as desired. Our Rotary Agitator gives thorough agitation and our Ideal Engine sufficient power.

On all Hardie Power Sprayers we use Our

IDEAL ENGINE

WE use this engine as it is compactly built, has no extra water or gasoline tank and is built for hard continuous service. The cooling system is the most practical of any.

No Tank No Fan No Freezing



Our complete catalogue giving prices of twenty different styles of hand and power sprayers, engines, nozzles, etc., is yours for the asking

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321-329 East Morrison Street, Portland, Oregon

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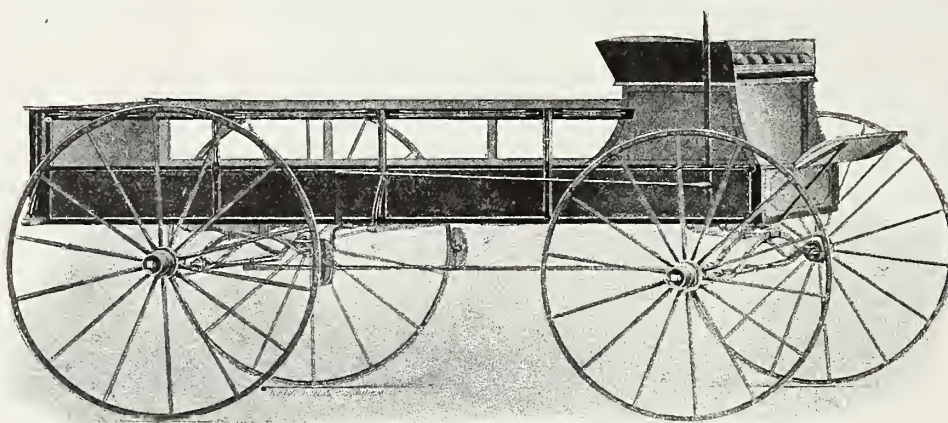
WHOLESALE AND RETAIL DEALERS IN

Vehicles and Implements

Carry large assortment of best styles of earth-working tools; also haying and harvesting machinery; also wagons for fruit delivery and for teaming; also driving vehicles for business and for pleasure uses.

WE RECOMMEND TO FRUIT GROWERS THIS WAGON NO. 120
MADE BY FREMONT CARRIAGE MANUFACTURING COMPANY

Bodies
42 inches
wide.
Have drop
end gate
with chains.
Hang low
on duplex
springs.



Uses the
celebrated
"Fitch Gear"
"Short Turn"
with
high wheels,
wide body
hung low.

Sizes: 1 1/8-inch, 1 1/4-inch, 1 3/8-inch and 1 1/2-inch axles. Bodies: 7-foot, 8-foot, 9-foot, 10-foot; 42 inches wide

THE NAME OF MAKERS IS GUARANTEE OF HIGHEST QUALITY

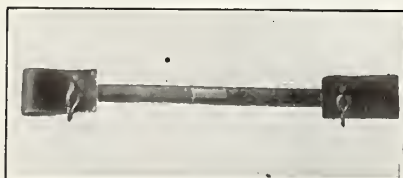
PROPAGATING THE ROSE.—The roses of the American class should be on their own roots. In many cases planters who have purchased grafted roses have had them frozen to the graft, and then disappointment and dissatisfaction follow. To encourage the growing and planting of roses more generally among farmers, more sales would follow if these plants were on their own roots, says Professor J. A. Balmer, rosarian, of Cle Elum, Washington. The hybrid teas are becoming more popular every year, and this class is the coming rose for nurserymen to propagate. Among the good new roses are the Killarney, Kate Moulton and the Richmond. The first step in the propagation of roses on their own roots is to thoroughly pulverize and enrich the soil surrounding the plant from which propagation is to be done. Then "peg down" with hair pin wire about a foot long with a mallet the lower part of the branches from which cuttings are to be taken. The effect is to start growth on these lower branches. Make cuttings with a "heel" where that

can be done, and cut in the fall at the time the foliage falls from the bushes. Cut to three eyes and put cuttings into a tub of water, leaving them there for a few hours. Two of the eyes should be above the "old wood." Put the cuttings into a sandy bed which has been shaded and that is not exposed to the currents of air. After thirty days, at growing temperature, the cuttings should be rooted; then increase the air currents gradually until the plants are exposed to the outside atmosphere. To make a good rich propagating bed, dig

a good deep trench and fill with barnyard compost from the horse stable to within nine inches and cover this with soil made of two-thirds sand and one-third rich alluvial soil, the essential point in propagating being to get the new vigorous tissues of the wood which will callous and make roots, then to keep the cuttings moist and out of draft until they are well started. In the spring set out in the propagating bed properly enriched and prepared so that rapid growth can be made during the summer to prepare the plants for the fall trade.

It does not pay to bark or bruise your trees. Buy

SMITH'S WHIFFLE TREE FENDER'S



Sent to any address on receipt of
75 cents. Send today.

C. H. SMITH Freewater, Oregon
Mr. C. H. Smith, Freewater, Oregon

Dear Sir: I consider your whiffletree fender a big step in the right direction for the protection of nursery stock and orchard trees. I can cheerfully recommend this as a valuable device.

Very truly yours,

W. S. Thornber,
Horticulturist at Agricultural Station
Pullman, Washington

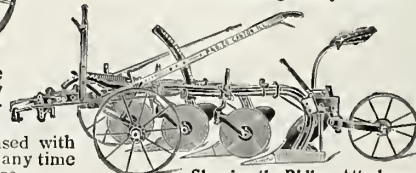
P & O Walking Gang Plows

P. & O.
Three-Furrow
Walking Gang
Plow

Made with Two or
Three Bottoms. A Third
Plow Attachment can be added to the
Two Furrow Plow. The Three Furrow
Plow can be cut down in size by removing
the outside beam and bottom.

A Riding Attachment
can be purchased with
the plow, or at any time
in the future. It is made to fit either size.

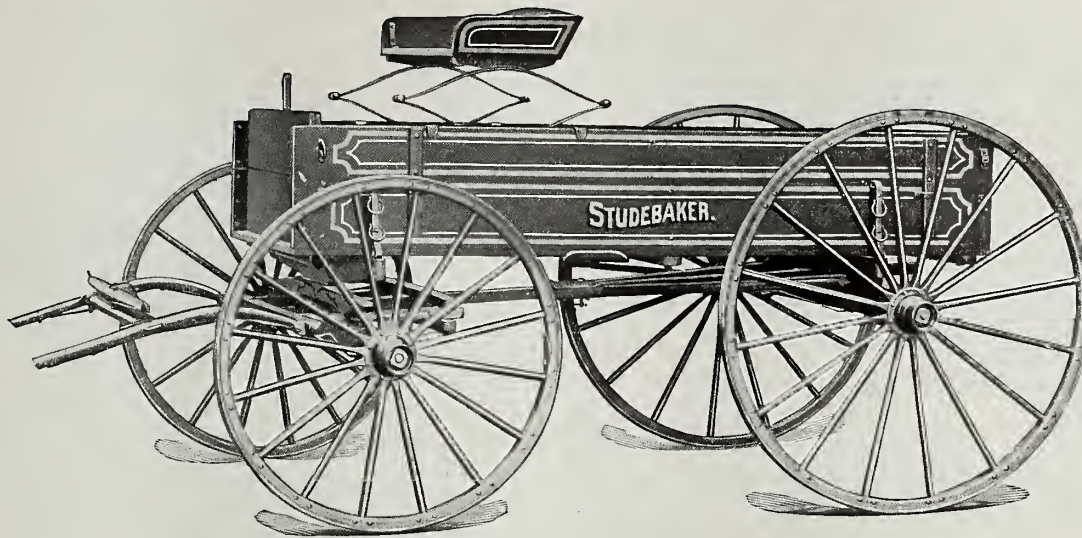
For downright hard work, when you need a plow
than will stand hard usage, that will stand the
pulling strain of eight or ten horses in any kind of
soil without being damaged, the P. & O. Walking
Gang beats them all. As it has no frame, there is
nothing to get out of order. Provided with three
levers, allowing a wide scope of adjust-
ment. Square corners can be made
without raising the bottoms out of the
ground. No gang plow made can equal
the P. & O. in turning sharp corners.



Showing the Riding Attachment.

Insist on getting P. & O. implements from your dealer. They are Backed by an Un-
qualified Guarantee. A Beautifully Illustrated Pamphlet, and a P. & O. Catalog, will be
mailed Free. Write for Catalog No. Q155

PARLIN & ORENDORFF CO., CANTON, ILLINOIS



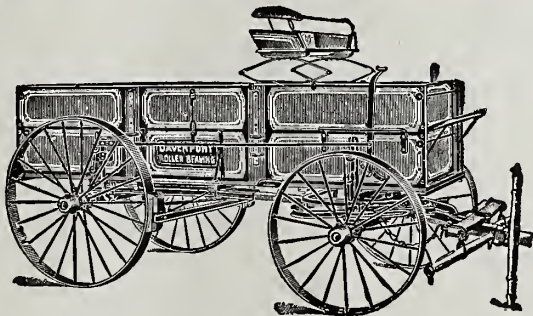
Studebaker one-horse wagons---the best wagon on earth. Prices on these wagons reduced January 1, 1910. Don't buy until you get the NEW PRICE on a Studebaker.

Studebaker vehicles cost no more than others. We want you to have our catalogue---a postal card will bring it to you, together with the name of the nearest agent.

Agencies at Hood River, The Dalles, Medford, Ashland, Grants Pass, Wenatchee, North Yakima, and two hundred other points in Oregon and Washington.

STUDEBAKER BROS. CO. 330-336 E. Morrison Street, PORTLAND, OREGON
Wagons, Buggies, Harness, Automobiles

DO YOU KNOW A WAGON BARGAIN WHEN YOU SEE IT?



You can pay a certain price and get an old style wooden wagon that you and your neighbors have always used.

That will satisfy you as long as you don't know anything better. But, you can pay just about the same price, possibly a little more, and

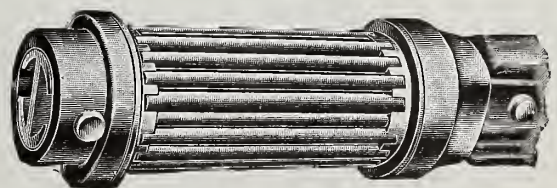
See What You Get for Your Money

Buy this Davenport Wagon and you get a wagon that is practically all steel---a wagon that has double the strength and double the life of your wooden wagon. There are no break-downs, nothing to rot, dry apart or work loose. First cost is the only cost. There are no repair bills. You get the automobile hub with its perfectly protected steel roller bearings. Unlike your wooden wagon, it is impossible for sand, dust, mud or water to enter the bearings. You have the straight instead of the tapering spindle. You oil all four wheels in one half minute. You do it without removing wheels. You get the wagon that is all convenience. You get easy running. You save your horses. Two horses pull as much as three with old style wagons.

This Roller Bearing Makes 30 to 50 per cent Lighter Draft

Which is the better wagon bargain for you? Would you rather have the old style wooden wagon?

Or would you rather pay the same price and get the long-lived, easy-running Davenport Roller Bearing Steel Wagon? Write for Catalog V to give you particulars.



DAVENPORT WAGON CO.

Davenport, Iowa

OLIVER'S SPECIAL ORCHARD PLOWS

No. 7 V

Write for
Circulars or
call on your
Nearest Dealer

Handles and
Clevis
Adjustable

Chilled or Steel



Showing plow
from rear, as if
at work among
trees, wheel
inside of
landside line.
Hub of wheel
does not project
to strike trees.
All levers down.
Third base can
easily be
attached.

No. 17 Two or Three Furrow Gang



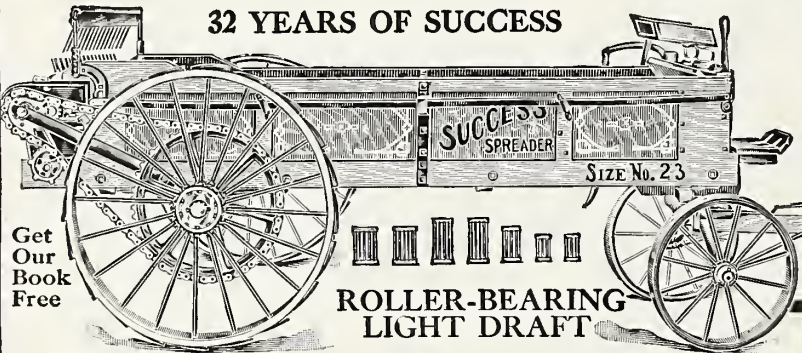
Oliver Chilled Plow Works

Portland, Oregon

South Bend, Indiana

San Francisco

32 YEARS OF SUCCESS



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SUCCESS SPREADER

The only spreader with a 32-year record of good work. Simplicity, Durability and Light Draft always foremost. Direct Chain Drive. No Cog Gears. The choice of men who investigate thoroughly. Wood or metal wheels. A generation of experience back of every Success. The leader from the first. Exclusive features all patented. Catalog of facts Free. Write us promptly.

Kemp & Burpee Mfg. Co. SYRACUSE N. Y.

APPLE BLIGHT IN NEW ZEALAND.—Mr. H. Morse, writing to the Horticultural Advertiser (England), says: "With reference to your article on the woolly aphis on apples last week, I have traveled this year through a great part of New Zealand, one purpose among others being to learn all that I could about their fruit growing, and I am perfectly satisfied, although they graft onto the Northern Spy and Winter Majetin stocks as a preventive against blight, it is a miserable failure. There is no country in the world so much cursed with American blight as is New Zealand. The trees after leaving the nursery, where a deal of attention is given to check it, become one mass, just as if they had been covered with snow. I saw growing in gardens seedlings nearly as large as your fingers with it. To read about it and to see it there is quite another question. Grafting is no defense against blight." In a recent article in "Better Fruit" Professor J. A. Balmer of Cle Elum, Washington, mentioned the fact that grafting on Northern Spy is no remedy against nor preventive of woolly aphis (American blight of the English), though in our Western horticultural meetings the question has come up dozens of times and there are still those who implicitly believe in the efficacy of the "Spy theory."

ROSES are red, and beautiful, too; Northern Pacific displays them to view. Fresh from the press in daintiest dress comes a book that is pretty to see. With paper and ink to make the eyes blink, the rose is extolled to a "tee." The N. P. has printed at an outlay unstinted, a book of the Portland Rose Show, which will take place right soon, in the fore part of June, and the book makes one eager to go. If you wish one addressed to you, send your request to the N. P. headquarters today. It's a booklet to save, if the pretty you crave, so write for one quick—don't delay.

LESS WORK

Drawn by two medium horses.
Will cut 28 by 30 acres or double-cut 15 acres in a day.
Will move 15,000 tons of earth one foot in a day.
Runs true in line of draft and keeps the surface true. All other Disk Harrows have to run in the half lap.
Has Improved reinforced main frame, and improved standards.
Don't be deceived by poor imitations or infringements.
There's only one original "Cutaway" and it's Clark's.
Saves time. Saves labor.
Saves money.

CLARK'S CUTAWAY TOOLS

BIG CROPS

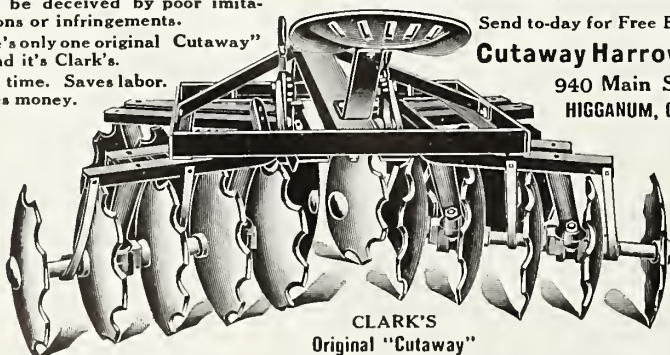
Crops increased 25% to 50%.
Better Grain, better Hay, better Fruit.

Takes place of Plow and Harrow.
Jointed Pole takes all the weight off the horses' necks.
We make 120 sizes and styles of Disk Tools.
Every machine fully warranted.
Thousands in use and giving satisfaction.
If your dealer won't supply you, we will.

Send to-day for Free Booklet.

Cutaway Harrow Co.

940 Main Street
HIGGANUM, CONN.



CLARK'S
Original "Cutaway"

Mitchell, Lewis & Staver Co., Western Agents, Portland, Oregon

D. McDONALD

Hood River, Oregon

Headquarters for
FARMING AND ORCHARD

TOOLS

Disc Harrow Extension for
Orchard Cultivation a Specialty

When you want any kind of Orchard
Tools come to me and get the Best

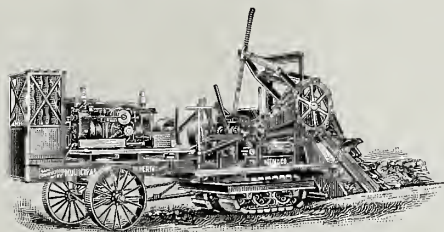
VEHICLES AND AGRICULTURAL IMPLEMENTS

THE BEST OF
ORCHARD AND GARDEN TOOLS
A SPECIALTY

**GILBERT - VAUGHAN
IMPLEMENT CO.**

HOOD RIVER, OREGON

The Austin Farm Tile DITCHER



1. Equipped with multipedal traction, which enables it to travel over boggy or wet ground without miring.

2. Has self-cleaning buckets and a self-cleaning spoil conveyor, so that sticky soil cannot cling to the bucket and load down the machine.

3. Will dig trenches from 12 inches to 18 inches wide, to a depth of 4½ feet, at rate of eight lineal feet per minute; will travel from job to job by its own power at rate of three miles an hour.

4. Only one man required to operate the machine; uses three gallons of gasoline per hour.

WRITE FOR CATALOGUE NO. 325

AGENTS WANTED IN UNOCCUPIED TERRITORY

**F. C. Austin Drainage
Excavator Company**

RAILWAY EXCHANGE, CHICAGO, ILLINOIS

IRRIGATION DITCHES

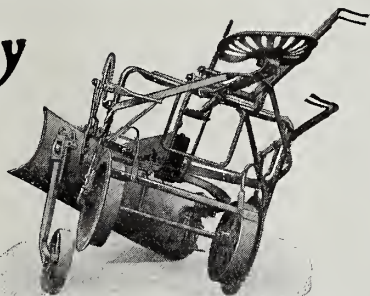
2¢ a Rod

Four to five miles a day, eighteen inches deep. You—alone—one man—four horses can cut them. Cost but \$1.25 to \$1.50 per mile with a

**20th Century
Grader**

an all-the-year-round irrigation machine. It's the irrigation farmer's best investment for a small sum. Many machines in one!

LOOK! You can grub, level land, ditch, throw checks or levees, make roads—move dirt as you choose with this one all-steel 600-pound machine.



20th Century tilted to cut laterals

MIGHTY FINE FOR CLEANING LATERALS

New, free catalog explains by big photos. Write now.

The Baker Manufacturing Company

742 FISHER BUILDING, CHICAGO



Excursion Rates to the East

DURING 1910

FROM ALL POINTS ON

The Oregon Railroad & Navigation Company

| | |
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| To Chicago | \$72.50 |
| To Council Bluffs | 60.00 |
| To Omaha | 60.00 |
| To Kansas City | 60.00 |
| To St. Joseph | 60.00 |
| To St. Paul | 60.00 |
| To St. Paul via Council Bluffs | 63.90 |
| To Minneapolis direct | 60.00 |
| To Minneapolis via Council Bluffs | 63.90 |
| To Duluth direct | 66.90 |
| To Duluth via Council Bluffs | 67.50 |
| To St. Louis | 67.50 |

Tickets will be on sale May 2 and 9, June 2, 17 and 24, July 5 and 22, August 3, September 8.

Ten days provided for the going trip. Stop-overs within limits in either direction. Final return limit three months from date of sale, but not later than October 31. One way through California, \$15.00 additional.

Inquire of any O. R. & N. Agent for more complete information, or

WM. McMURRAY

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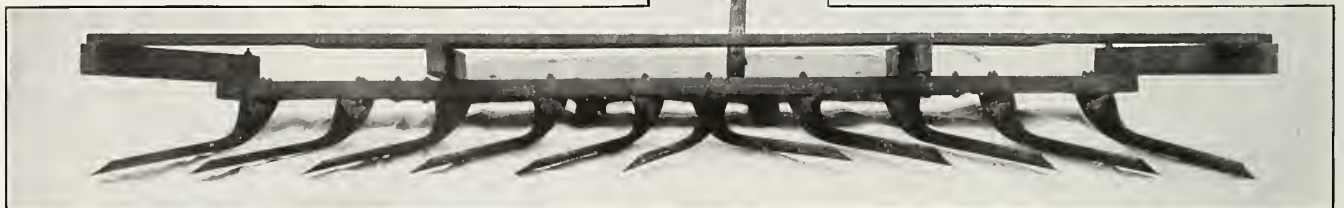
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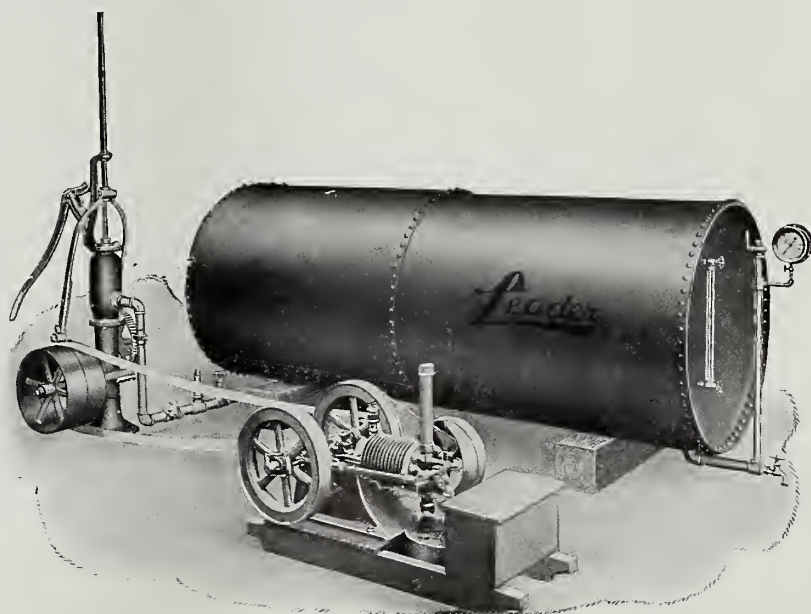
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